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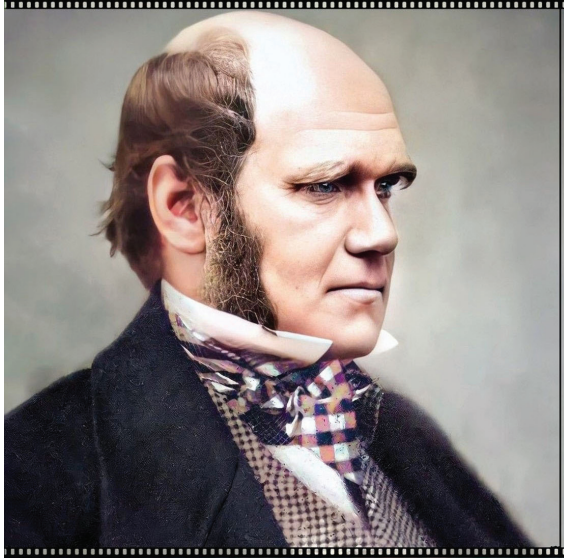

Charles Darwin and Jim Corbett:
Parallel Biographies

CHARLES DARWIN and **JIM CORBETT:** PARALLEL BIOGRAPHIES

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Dedicated to the memory of Vratislav Mazák,
Legendary Czech paleoanthropologist and zoologist, who deeply respected and dearly loved both
Charles Darwin and Jim Corbett

Contents

INTRODUCTION

Isn't it amazing how little we change from our childhood? During all my life, from my teenage years, I had two great role models, indicated in the title of this book, and that has not changed! But frankly, one thing has changed – I never thought I would ever be writing their biographies. Although I have written a few books, I was always sure that I was not the kind of person who would write someone's biography. To be a biographer is a totally different style of activity. So, I am starting this book a little bit unaware of where it takes me.

To avoid any misunderstanding, let me reveal from the very beginning that this book is not written as a 'classic biography'. There are already a number of biographies about both Charles Darwin and Jim Corbett. This book is more of an attempt to display the psychological profiles of Darwin and Corbett, both seen from the very personal point of view of their lifelong admirer. A bit like their enhanced and colorised photos on the book cover (coloured photography was not available during their lifetimes), this book is the result of my deeply personal view on these two remarkable humans and self-taught naturalists. Therefore, the text that follows this introduction will concentrate on their private lives and various major or minor circumstances (sometimes completely neglected in their more academically written biographies) that shaped them into the kindest and humblest human beings, great naturalists, and intensely adventurous and creatively thinking scholars.

An important factor that might have given me an impetus and inspiration to start penning this unusual book was writing my most recent book, *The Human Story Behind Scientific Discovery*, that I sent to the editor in the beginning of January 2020, only days before starting this double biography. In the recently finished book

(published in July 2020 by Logos), I was looking at the usually neglected aspects of scholars' lives, such as how they were treated in their own family; how they were encouraged or discouraged; how they were educated; what they did for a living; what kind of stresses they had to cope with; what sort of personalities they were; how they dealt with their followers or detractors; and how they managed to think out of the bounds of the established norms of the scholarly beliefs of their time, etc. All this was so fascinating for me! Both Corbett and Darwin, the latter in particular, are not only the focus of my recent book, but also, they both equally share a big part of my heart, I was constantly comparing them in my mind with whatever aspect of a scholar's life I was discussing.

An unusual element of this present book is that it looks not only into the biographies of Charles Darwin and Jim Corbett, but at their life stories side by side, comparing them and finding numerous, and sometimes surprising, commonalities together with the obvious differences.

This genre of 'parallel biographies', or 'parallel lives', comes from Plutarch, Greek historian and philosopher of the first century AD (46 AD – 119 AD). In his highly acclaimed series of writings about remarkable Greek and Roman historical figures, Plutarch tried to show the character and personality of his heroes, but not necessarily the chronological line of events. This interesting type of investigative biography can be very productive, as, instead of concentrating on a single person, a constant comparison with another person gives the reader (and the writer) a fresher perspective to discern features that are otherwise hard to notice when focusing on a single person.

Sadly, this potentially prosperous genre of 'parallel biographies', entailing looking at two comparable lives, did not generate the successful following it could have had in subsequent centu-

ries. I know few examples of such comparisons. Some exceptions that I am aware of, are books usually dedicated to the leaders of nations, and mostly contemporaries, like *Attlee and Churchill: Allies in War, Adversaries in Peace* by Leo McKinstry, looking at two British prime ministers of the same epoch, or *Hitler and Hiro Hito* by Geoffrey Barraclough, looking at two infamous allies during the second World War. I also remember a couple of pages' long list of interesting parallels between Adolf Hitler and Joseph Stalin by Victor Suvorov in the introduction of the insightful book *The Chief Culprit*. And of course, there is a monumental 1000+ page *Hitler and Stalin: Parallel Lives* by Alan Bullock. The Second World War heroes and antagonists dominate such works.

Perhaps I should address another issue as well from the very beginning of this book. At least for some readers, the very aim of this book, a comparison of Charles Darwin and Jim Corbett, might seem totally inappropriate. "How on earth can someone compare such different humans, with such different lifestyles, values, and life goals – an iconic scholar, the symbol of scholarly brilliance on one hand, and a brave tiger hunter on the other hand?" I can imagine at least some readers would ask this question politely, in genuine confusion. For good reason, many readers would consider it more appropriate if I had coupled Charles Darwin with Alfred Russel Wallace, the co-discoverer of the principle of natural selection, and on the other hand, compared Jim Corbett with another British hunter and author of popular books on similar topic, Kenneth Anderson. But Charles Darwin compared with Jim Corbett?...

It is true that the name and fame of Jim Corbett cannot be compared with Charles Darwin for general popularity and the size of their scholarly legacy, but labelling Corbett "a brave hunter" is a huge understatement for this multitalented personality.

Corbett was primarily a great self-taught naturalist who developed an encyclopaedic knowledge of the flora and fauna of Northern India, if not of the whole Indian subcontinent, with a keen eye and brilliant analytical mind that left a scholarly legacy miles ahead of its time (and as I will argue, probably even ahead of contemporary 21st-century scholarship in some cases). He was a pioneer conservationist whose work was acknowledged by the greater and lesser authorities of the British Empire and whose name was given to the first national park of India, the "Corbett National Park", and later to a newly categorised tiger subspecies. He was also a dedicated filmmaker who was arguably the first to film tigers in their natural habitat (according to the letter from Trubee Davison, former director of the American Museum of Natural History, to Jim Corbett. See: Maggie Corbett, "Notes and Biographical Sketches", in *Behind Jim Corbett's Stories*, vol. 2, p. 281). He was also a talented author of best-selling books that captivated millions of readers all over the world, with two of them who went on to be published in the very select Oxford World Classic series; and finally, he was a great humanitarian who was respected, admired, and even adored by everyone who knew him, from simple Indian villagers to the Viceroys of India and even the Queen.

Certainly, there can be no questions about the big **differences** between the two heroes of our book, as their characters and lifestyles exhibited tremendous contrasts. To start with:

- ✓ Their family backgrounds were very different – Darwin came from a family of upper middle-class English intellectuals and free-thinkers; Corbett was a Domiciled British[1] by

[1] A Domiciled British, as opposed to a pure British-born resident, is someone who was born in British-Indian empire from parents with pure European ancestry. If the ancestry had mixed Indian blood, then the appellation becomes 'Anglo-Indian'.

birth, whose family had settled in India from Ireland and the United Kingdom, at least two generations earlier, and despite all the reverence and love shown towards him, he was still sometimes looked down on socially by the British-born residents as a result of the complex social ladder of the British Indian society.

- ✓ Their working lives were also a world apart – Darwin never worked for a living, as his family inheritance, coupled with his own modest personal needs provided more than enough for a comfortable living; Corbett, on the contrary, worked almost all his active life. He had to quit school to start working while still a teenager to support his large dependent family's needs and wants. He would later further substantiate his income through the acquisition of several businesses[2], and, at a very late age till his death, he was a full-time author of books.
- ✓ In terms of relationships, family, and descendants they also were very different – Corbett never married and any alleged relationship he had or tried to have, have yet to be proven, whereas Darwin and his wife Emma had ten children, seven of whom lived to maturity, often achieving great professional success in their lives. Having children provided Charles with great joy, as well as the greatest tragedy of his life, when his first daughter, beloved Annie, died at the age of 10.
- ✓ For the special interest of this author, they were very different according to their musicality despite the interesting fact that they both had professionally educated pianists as

[2] Among Corbett's side businesses, when he was working, were a hardware shop, an estate agency, a tea plantation and when he retired from his paid job, he also ran a coffee estate in Tanganyika (modern-day Tanzania).

their closest female family members. Darwin complained that he could not receive pleasure from music (at least in the last part of his life). Corbett, on the contrary, was explicitly musical, had a nice tenor voice, loved singing, and played guitar and flute. He certainly used his musical talent and brilliant ear for identifying countless bird and animal species calls and was a great master of mimicking animal calls.

- ✓ In terms of character, they had many similarities (see below), but they also exhibited marked differences: Darwin was in a constant need of someone to take care of him and his requirements; Corbett, conversely, being independent by nature since a young age, could take care of himself when alone. He could sleep in the jungle or spend a whole night in trees, and live off nature's bounty, eating whatever fruit he found or any commodity he was given, and would wash himself and his clothes in cold water from a natural source.
- ✓ Their physical constitutions were also very different – Darwin was of relatively fragile health and suffered from many (and often mysterious) symptoms of ill-health most of his life; Corbett, on the contrary, was known for his unfailing health[3] and iron constitution, enabling him to walk tirelessly for tens of miles a day in rough country and sometimes endure days of inhumanly strenuous life-endangering work without food or sleep. Also, Corbett was ready to fight for his country and was always among the first to seek a commission when war was declared – South African Boer war,

[3] This is true for the whole of Corbett's active life. But when very young and when he was past his middle sixties Corbett suffered severe ailments.

World War I and World War II – though he was not always successfully or directly given the commission.

And now, after these few differences, here is a much longer, and probably sometimes surprising, list of the **common characteristics** that unite these two heroes:

- ✓ Both Darwin and Corbett were born naturalists of the highest standard, and they left legacies that have withstood the test of time. They both had a keen observant eye and were confident in the power of good observation. Nature was their most important teacher.
- ✓ In a certain sense, both Darwin and Corbett were amateurs, as neither finished the formal academic education required to be known as 'certified scholars': Darwin was a mere Bachelor of Arts, without finishing his medical degree, and without a Ph.D., and Corbett did not even finish secondary school and hadn't been awarded a certificate of education. They both hated the stifling atmosphere of the existing formal education of their times.
- ✓ They both had a keen mind able to reconstruct past events – Darwin was a master of finding evolutionary forces behind the slow, hard-to-notice changes and slightest mutations in life organisms, and Corbett was a master of reconstructing dramatic scenes of jungle tragedies from the faintest of signs observed and detected on the ground and the immediate environment, very much like a Sherlock Holmes of the jungle[4].
- ✓ They both were very passionate about animals and were outspoken advocates of animal rights; both wrote moving

[4] This reference to Sherlock Holmes of the Jungle was originally made by Corbett's first biographer and good friend, Lord Malcolm Hailey. Later in the book there is a section dedicated to this topic.

plaints for a wiser and humane, wider society, calling for treating animals kindly, miles ahead of the ethics of the society in their times.

- ✓ They both loved nature in its simplest form from their early years, and possibly surprisingly for some readers, both enjoyed fishing and hunting, and both were skilled taxidermists.
- ✓ Both came from large families with many siblings – Charles had five siblings, and Jim had thirteen siblings[5].
- ✓ Both of them lost one parents in their early years (Darwin, his mother, and Corbett, his father).
- ✓ Both were the second-last-born children of their parents.
- ✓ Both of their youngest siblings (Mary Ann Darwin, and Archibald D'Arcy Corbett) died young, leaving Charles and Jim the last surviving child in their families.
- ✓ Despite the phenomenal success of their writings, they were both extremely humble, and were initially apprehensive that their writings would not be well received and would be perceived as uninteresting and unaccepted by others. They both waited many years to finally publish their most important writings to a wider public.
- ✓ They both became, I would say, adored, and in a certain way, wrongly idolised by their followers and admirers, who were unable to grasp the complexity of their interests and life goals. Darwin for some became a symbol of militant atheism, though he never rejected the idea of a higher intelligence that could answer the questions beyond human perception. Similarly, the name of Jim Corbett, for some,

[5] Among Corbett's siblings were two half sisters and three half brothers, from the previous marriages of both his parents combined.

became the symbol of a 'brave tiger hunter'[6], missing the cardinal points of Corbett's life, materialised in spending years on educating the younger generation about wildlife and its conservation; and his efforts to preserve the fauna and flora ultimately led to the creation of the first national park in India.

- ✓ They both were dedicated to their families, and interestingly, for both of them their most dedicated life partners were their closest female relatives: Charles married his first cousin Emma, and Jim spent his entire bachelor life with his maiden sister Maggie.
- ✓ Additionally, both of their female homemakers, Emma Darwin and Maggie Corbett, were very skilled piano players, were older than their famous men, yet survived their companions, living to a very ripe age (Emma Darwin lived till 88, and Maggie Corbett lived till 89).
- ✓ Both Darwin and Corbett had troubling and not fully understood (even today) health conditions. Darwin suffered most of his life after his great trip on the *Beagle* from an array of symptoms, and Corbett, despite his iron constitution, had occasional mysterious and frightening experiences at night.
- ✓ Neither made a living from the activities they became famous for; Darwin never worked as a scholar and was never known as "Prof. Darwin", or "Dr. Darwin", and Corbett steadfastly refused governmental financial rewards for risking his life hunting man-eating tigers and leopards.
- ✓ Both of them were very kind and compassionate people, caring for the lives and welfare of slaves (Darwin); risk-

[6] The term 'brave tiger hunter' refers to Corbett being considered an out-of-sorts hero for the local people in volunteering to hunt dangerous man-eaters, alone, on foot and sometimes at night, when other hunters had failed.

ing his life for the simple hill inhabitants of the Himalayan foothills, and always feeling concerned and sympathetic towards the poor and deprived people (Corbett).

- ✓ They both opposed the reigning ethnicity and creed prejudices of their time. Darwin, based on his own experience, praised people of African origin, and Corbett, also based on his own life experiences, sincerely praised representatives of the lowest castes of India.
- ✓ Both were utterly sincere and frank, openly admitting their weaknesses, and were humble about their strengths.
- ✓ Both Corbett and Darwin were prolific writers and left a number of still popular books that have ever remained in print.
- ✓ Although millions have read their writings with admiration, both were slow writers, struggling over every sentence, and never knew their work would have reached such a vast audience, around the world and across time.
- ✓ Despite the fact that they were acknowledged and loved during their lifetimes, much wider recognition came after their death. Characteristically, the British prime minister and the Queen did not attend Darwin's funeral, and Corbett's ideas as a naturalist were not adequately acknowledged in the scholarly world during his living.
- ✓ Both Charles Darwin and Jim Corbett were never knighted. While it had been usual to knight scientists since the 18th century (Sir Isaac Newton was the first), many of Darwin's contemporaries were knighted (Sir Richard Owen, for instance), while same applied for Corbett despite his innumerable services to the crown (his contemporaries were knighted, Sir A.W. Ibbotson, for instance)

- ✓ As both were basically self-taught naturalists without any official academic credentials, they never had students, although they both had ardent followers, during their lifetime and after their death.
- ✓ They both left a large and quickly growing legacy: Numerous books, films and documentaries made about them; animal species and places, named after them; and in our technology age, active social media fan clubs with ongoing online chats, likes, shares and discussions, following them.
- ✓ And a final and chilling parallel: as if the connections between the lives of these two remarkable humans and self-educated naturalists were conceived somewhere on a higher level, both Charles Darwin and Jim Corbett left this world on the same date, April 19th.

* * *

All these details, whether they exhibited closeness or marked differences, may lead us to better understand the forming of the life and personalities of these two remarkable humans. I shall follow their most important lifetime events, their family backgrounds, their inborn or developed interests, their education and character formation, effects of later life events on their personality, and the legacy they left behind.

The book will have many sections, some small and some large. In these sections I shall discuss about their families, parents, childhood, education, friends, character, health, stresses they endured, and ideals they stood for.

So, in the subsequent pages, I will argue that the central reason for the universal appeal of Darwin's and Corbett's legacy, instead of their encyclopaedic knowledge, influential ideas and still pop-

ular books, is primarily their utterly human and lovable character, their gentle, compassionate, humble nature, their love for voiceless humans and animals, and their profound sincerity and self-criticism.

And finally, if a single reader, who took up this strange little book from being a lifelong fan of one of its heroes then becomes a fan of both after reading it, I would be able to say happily that I have achieved my goal. Czech biologist, celebrated paleoanthropologist and zoologist Vratislav Mazák, to whose memory this book is dedicated, was exactly such a scholar who, I am sure, would have loved to read this book. He made a great contribution to palaeoanthropology by describing *Homo ergaster*, an extinct hominin species of the early Pleistocene, from a previously unspecified fossil; and to zoology by describing *Panthera tigris corbetti,* an extant Indochinese tiger subspecies, naming it after his favourite naturalist Jim Corbett (Mazák, 1968).

FAMILY, ANCESTORS, BIRTH

As promised in the introduction, I am not going to discuss the family trees of Charles Darwin and Jim Corbett as in classic biographies. We need only to remember that, unlike Charles Darwin, who came from an upper-middle-class family with strong intellectual tendencies and a remarkable lineage of thinkers, philosophers, scholars, writers, and doctors, Jim Corbett was a domiciled British born in India[7], with a hard-to-understand social status in colonial India, somewhere between Anglo-Indians[8] and pure British-born residents.

Darwin's family had a very close friendship with Josiah Wedgewood's family, famous for their pottery works, and this family friendship grew into blood relationship, with many marriages between these two prominent families, including Charles Darwin's own. Similarly, Corbett's family initially had a very close acquaintance with William Richard Nestor's family and later forming blood kinship. The Nestors coming from Allahabad had moved to Kaladhungi in the early 1860's and made their home near the Corbett's winter home in that village at the foot of the Siwalik hills. As children they had played together and when they grew up, two married couples were formed among them, and the bond with the Nestors, through their nieces and nephews, stuck to Jim and her

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[7] While archive records show that Corbett's paternal grandfather was born in Dublin, Ireland, but came to settle in India in the early 19th century; on his maternal side, the origin is uncertain: his maternal grandmother had been raised in a European Catholic church orphanage in Calcutta, India, her origin and ancestry are still unknown for the moment.

[8] It is assumed in this book that the definition of Anglo-Indian is for a person with mixed British and Indian blood in its ancestry. See later also.

sister Maggie until they had left India and settled in Kenya many decades later.

Another important factor for forming of the character of the two heroes of this book was that both Charles Darwin and Jim Corbett were reared in large families, both being the second-to-last born children, and the last surviving into adulthood of their parents. Both were born when their mothers were at quite an advanced age.

Charles was born in Shrewsbury, UK, on Sunday, February 12, 1809, famously the same day Abraham Lincoln was born in the USA. Jim Corbett was born in Nainital, India, on Sunday, July 25, 1875, 66 years later. So, for 2460 days, or almost seven years, from when Corbett was born until April 19, 1882, when Charles Darwin passed away, the two were contemporaries[9]. Not so much, you might say, but it is still heart-warming for me, their lifelong admirer, to know that they both lived on this planet together for seven years. Even the single year that I lived while Jim Corbett was still alive, from February 12, 1954, when I was born (yes, to my joy, I share my birthday with Charles Darwin and Abraham Lincoln) until April 19, 1955, when Corbett passed away, which totals precisely 431 happy days, seems to me as a true gift from Fate.

[9] But, of course, they were not exact contemporaries, meaning that they did not share a significant lapse of time in adulthood.

EARLY CHARACTER

According to the biophilia hypotheses (Wilson,1984) we humans have a natural tendency to love all kinds of expressions of life. For some this deep love reveals itself only in certain moments of their busy lives, but for others it becomes an overpowering force of life. Apart from memories of Charles Darwin's childhood from his family members, we can see this interest expressed clearly in an early painting (by Ellen Wallace Sharples) of seven-year-old Charles, who is depicted happily embracing a pot of thriving flowers. This passionate love of all living forms would remain with Charles all his life (see photo).

Here are some of Charles' own words on his early character from his autobiography: "… [I] collected all sorts of things, shells, seals, franks, coins, and minerals. The passion for collecting which leads a man to be a systematic naturalist, a virtuoso, or a miser, was very strong in me, and was clearly innate, as none of my sisters or brother ever had this taste" (Darwin, Autobiography, pg. 23).

In the following words (from the same source) we can feel Charles' love of hunting and fishing, somehow combined with his natural gentle love of nature: "I had a strong taste for angling, and would sit for any number of hours on the bank of a river or pond watching the float; when at Maer (the house of his uncle, Josiah Wedgwood) I was told that I could kill the worms with salt and water, and from that day I never spitted a living worm, though at the expense probably of some loss of success" (Darwin, Autobiography, pg. 27).

For young Corbett, who was born in Nainital and lived in the spectacular settings of the Himalayan foothills of Northern India, life was directly connected to wildlife on a daily basis. Not unlike Charles Darwin, who was obsessed collecting various species of

insects, young Jim showed not only a remarkable interest in, but also a great talent for recognising hundreds of species of local flora and fauna, and even classifying them according to his own criteria. Blessed with a great memory and analytical mind, Corbett's knowledge of nature soon became legendary, plus he displayed great talent in imitating the calls of various animals. This talent was obviously based on Jim's solid musical abilities. He played guitar, sang very well in tenor voice, and enjoyed playing a flute at family musical gatherings. Music ran in the genes of both naturalists, and as mentioned, both of their closest life partners were high-level piano players: Corbett's sister Maggie taught piano, and Emma Darwin was an accomplished piano player, who took lessons from the best teachers of the world, including Polish piano virtuoso and composing genius Frederic Chopin. Both men shared from their early years not only the love of nature, but also a remarkable passion for classifying the animal world around them, Charles obsessed by collecting insects, and Jim, classifying and collecting local bird species.

PARENTS AND EARLY CHILDHOOD

Both of their mothers were older when the boys were born. Charles' mother was 43, and Jim's mother was 38 years old. Both of them lost a dear, caring parent at a tender age. Charles' mother died when he was eight, and Jim's father, the quiet and book-loving Nainital postmaster, died when Jim was six. A couple of months after his mother's death, Charles was sent to boarding school together with his older brother, Erasmus. Unlike Charles Darwin, Jim was always very closely connected to his family members.

There was a big difference in the characters of our heroes' parents. In a certain way, the roles of their mothers and fathers were mirrored in their respective families. Charles's father, Robert, was an imposing man, a freethinker with a tremendous reputation as a doctor, a true patriarch and the leader of the family, whose word was the highest authority for everyone. Charles' mother was a gentle soul, hard to see and hear, somewhat voiceless and invisible in the family, existing in the father's shadow, a harpsichordist, who passed away at the age of 51. Quite amazingly, although eight years old at the time of his mother's death, Charles did not have any vivid recollection of her.

Jim Corbett's father, Christopher William Corbett, was a gentle-natured man. He was a hard-working, quiet man, and an avid reader – an important feature transferred to Jim. For most of his life, after serving as an army doctor (apothecary, to be precise), Christopher worked as post-master of Nainital. He secretly worried (D.C. Kala mentions this) that he was no match for his brave wife[10]

[10] Jim's mother, Mary Jane Corbett (née Prussia), who faced the Indian mutiny bravely with her three children after the death of her first husband, moving from Agra to Mussorie, nearly 500km, on her own.

nor her first husband, Charles Doyle, who died dramatically as a hero, while on duty during the Indian mutiny in 1858. Christopher passed away on April 21, 1881, at the age of 58, when Jim was 5 years old. Jim's mother was a very different character. She was a very influential figure in Nainital, for her unfailing energy, bravery, all-encompassing charity, and independent character. She was a true matriarch of the family. She gave her children lots of freedom, and they all followed her example of working hard and helping everyone in need, something Jim and Maggie Corbett maintained for life. As Jim described her once, she had the courage of Joan of Arc and Nurse Cavell combined...

To summarise, we can probably say that Darwin came from more of patriarchal family, whereas Corbett's family atmosphere was more matriarchal in nature.

PARENTAL APPRECIATION

Parental appreciation and expectations leave indelible marks on every normal human being throughout their entire lives. Despite the fact that Charles was born in a family of intellectuals and high achievers, it did not give him a positive psychological start and self-confidence. On the contrary, his influential father, Robert, did not have a very favourable opinion of his youngest son. For Robert Darwin, Charles was a distracted child and unfocused young man who was going to waste his life. "You will be a shame to our family" – such words would break the heart of any young man, and, undoubtedly, soft-hearted and impressionable Charles must have been devastated by his father's low opinion of him. As Charles wrote candidly in his autobiography, "To my deep mortification my father once said to me, "You care for nothing but shooting, dogs, and rat-catching, and you will be a disgrace to yourself and all your family" (Darwin, Autobiography, pg. 28).

No wonder these words stayed with Charles for life. We could probably say that all his subsequent life Charles was trying hard to prove his worth primarily to his father. Psychoanalyst Edward J. Rempf famously suggested that Charles' rebellious stance towards the figure of God was the manifestation of his "expression of repressed anger toward his father" (Rempf, 1918:125).

In the second half of his life Charles was very happy to see that Robert gradually changed his opinion of him. Charles definitely was not the only high-achiever who worked tirelessly to prove early parental neglect (or negative opinion) unjust. Like many such people, Charles remained sceptical of his own abilities for life, even in the face of great adulation from some of the brightest minds of his time. Given the early demise of Charles's barely-remembered

mother, most likely his early life was dominated by his larger-than-life father.

Unlike Charles Darwin's overpowering father's negative opinions, Jim Corbett's childhood, as much as we know, was full of positive emotions, despite times of material need and physical challenges. After his gentle book-loving father died (when Jim was five), his mother remained the overriding force in the life of all her children, including Jim. Martin Booth (1986) expressed the opinion that Jim's mother possibly was the central force behind Jim's remaining a lifelong bachelor. Without much information on this sensitive matter, we cannot discuss it here, but on one thing we could probably all agree – Jim's mother was giving her children an inspirational model of brave, affectionate, compassionate behaviour, and was trying to develop these same qualities in her children by different means, including direct messages, like these words she wrote in a letter to Jim for his 25th birthday in July 1900: "…Be a Man in all the hidden sense. That gives the grand old word its weight. A Man who finds recompense in knowing he has done the right. Suit you like men, be strong. P.S. I Love You…" (Extract of letter from: Mary Jane Corbett (Nainital) to Jim Corbett (Mokameh Ghat). Dated 28th July 1900. Courtesy of Oxford University Press archives, first published in "*Behind Jim Corbett's Stories*", Vol 2, 2020).

Charles' disapproval was probably deepened by his mediocre achievements at school. In his own words: "I have been told that I was much slower in learning than my younger sister Catherine, and I believe that I was in many ways a naughty boy" (autobiography, pg. 26). Charles' school friends were probably puzzled by the scholarly brilliance and fame he achieved later in his life.

What we generally can deduct from combining various sources is that Charles' intellectual and high-achieving family gave him a

competitive edge and the desire to prove his worth, whereas Corbett's family provided him a model of compassion, cooperation and dedication towards fellow humans and voiceless animals.

DEVELOPMENT OF CHARACTER

Neither of the two heroes of our book were prodigies. On the other hand, they both had great obsessions, zeal for classifying things, an eye for detail and an open mind. We know that Charles was a very frank and emotional child. And as many profoundly frank humans, he expected the same openness from others. As a result, it was very easy to trick him. The story of his friend tricking him into stealing cakes from a local shop is a classic story of gullibility. Here is the story, told by Charles himself:

> "I must have been a very simple little fellow when I first went to the school. A boy of the name of Garnett took me into a cake shop one day, and bought some cakes for which he did not pay, as the shopman trusted him. When we came out I asked him why he did not pay for them, and he instantly answered, "Why, do you not know that my uncle left a great sum of money to the town on condition that every tradesman should give whatever was wanted without payment to any one who wore his old hat and moved [it] in a particular manner?" and he then showed me how it was moved. He then went into another shop where he was trusted, and asked for some small article, moving his hat in the proper manner, and of course obtained it without payment. When we came out he said, "Now if you like to go by yourself into that cake-shop (how well I remember its exact position) I will lend you my hat, and you can get whatever you like if you move the hat on your head properly." I gladly accepted the generous offer, and went in and asked for some cakes, moved the old hat and was walking out of the shop, when the shopman made a rush at me, so I dropped the cakes and ran for dear life, and was astonished by being greeted

with shouts of laughter by my false friend Garnett." (Darwin, Autobiography, pg. 26).

The very fact that Charles remembered the name of his false friend so well, as well as the location of the cake shop, tells us how deeply he felt embarrassed and possibly betrayed. To our delight, such incidents did not deter Charles from being one of the frankest humans that walked this planet, although it possibly made him more careful with new friendships and more sensitive towards criticism.

Charles wrote candidly of his passions and interests for the natural world, travel, and hunting:

> "Early in my school days a boy had a copy of the 'Wonders of the World,' which I often read, and disputed with other boys about the veracity of some of the statements; and I believe that this book first gave me a wish to travel in remote countries, which was ultimately fulfilled by the voyage of the "Beagle". In the latter part of my school life I became passionately fond of shooting; I do not believe that any one could have shown more zeal for the most holy cause than I did for shooting birds. How well I remember killing my first snipe, and my excitement was so great that I had much difficulty in reloading my gun from the trembling of my hands. This taste long continued, and I became a very good shot." (Darwin, Autobiography, pg. 44).

Living so close to the jungle, and with his natural disposition towards animals and adventures, Jim's young years were spent mostly in sporting games and reading adventure books[11]. Blessed with a strong physical constitution and the natural ability of

[11] Jim's favourite author was American novelist Fenimore Cooper, whose books like the *Deerslayer*, *Pathfinder* or *Last of the Mohicans* captivated his young mind, growing him into an adventurous lover of nature.

a peacemaker and leader, Jim was often the leader during the games, and very popular both with boys and girls. His early years were closely connected to hunting, first by catapult, then bow pellet and gradually leading to the use of a gun (when he was 10) and a little later, a rifle. Jim was taught the basics of hunting by his eldest brother Tom[12]. The very first lesson occurred when Tom gave him a catapult about the season when hunting was strictly forbidden – this was during several months when birds are busy raising their young. So, Jim understood from his early days the concept of responsible hunting that was coined much later. Jim well remembered the excitement of killing his first leopard, when all his body was trembling, very much like Charles Darwin after killing his first snipe.

Characteristically, Charles Darwin also wrote with his unfailing frankness about his own cruelty that he deeply regretted:

> "Once as a very little boy whilst at the day school, or before that time, I acted cruelly, for I beat a puppy, I believe, simply from enjoying the sense of power; but the beating could not have been severe, for the puppy did not howl, of which I feel sure, as the spot was near the house. This act lay heavily on my conscience, as is shown by my remembering the exact spot where the crime was committed. It probably lay all the heavier from my love of dogs being then, and for a long time afterwards, a passion. Dogs seemed to know this, for I was an adept in robbing their love from their masters" (Darwin, Autobiography, Pg. 27).

Similarly, Jim Corbett also wrote candidly about how he deeply regretted killing animals indiscriminately. Later in life, but before he stopped trophy hunting, Jim once killed a leopard that strangely

[12] Thomas Bartholomew Corbett (Tom) was Jim's senior by fifteen years.

had returned to the same carcass after being already shot and wounded some time before:

> "The leopard, I very greatly regret to say, had a reason for returning to the kill, and when I found what this reason was I was consumed with remorse. Leopard cubs can fend for themselves at a very young age by catching small birds, rats, mice, and frogs, and I can only hope that the cubs of the gallant mother, who after being wounded, risked her life to procure food for her young, were old enough to fend for themselves, for all efforts to find them failed" (Corbett, Jungle Lore, Chapter nine).

We probably all have done things that we regret, but not all of us have inner honesty to admit doing them publicly.

Jim was very open in relationships and had a natural ability to befriend many instantly with his open and frank approach. He maintained this open social character for life. For instance, he took infinite pains to write individual replies to each of his readers' letters, considering them as his friends and would often write "All who read my books are my friends" as a dedication when asked for a signed copy of his book.

Conversely, Darwin preferred socialising among a closer, more trusted circle of friends, and felt more vulnerable with a wider society. Possibly Charles' uneasy speech was one of the reasons for this shyness, particularly coupled with his introvert character, well suited to scholarship. Although Charles was not a severe stutterer, he sometimes had problems, which increase when stutterers communicate with people they do not know well or with whom they are not at ease. It is well-known that speech problems ran in his family from his father's side.

Almost similarly, Jim had initially trouble addressing to an audience which possibly could have the same allusion in modern psy-

chology as ‘stage fright’. His sister Maggie recalled in her biography of Jim (see in *Behind Jim Corbett’s Stories*, vol. 2:280-281) that his first attempt at public speech left Jim completely frozen, but he found the means to overcome this by taking a small piece of paper from his pocket and using it as a dummy written discourse. He then gained the confidence ever after, and this helped when the time came for him to face the wider public including high officials, school children and members of other institutions, for the presentation of his wildlife films and when doing lecture on jungle lore for the training of allied troops prior to their jungle warfare in Burma.

So, to conclude, Jim was more outgoing than Charles, friendly, and extremely generous and trusting towards not only his friends, or acquaintances, but also to total strangers, as attested by many more anecdotes in existing Corbett biographies and in some of his own stories.

EDUCATION

It would be natural to assume that the education Darwin and Corbett received were worlds apart. And really, Darwin had a full education, including tertiary education at Cambridge University. Corbett did not even finish secondary education, as at the age of 17 he had to quit school and started working[13] to support his family. So, we can, in a certain way, say that Darwin was in a very different class by his education than Corbett.

At the same time, if we look closer, we will realise that the differences in their education are not really as big as it might seem on the first sight.

Despite the fact, that Charles Darwin spent several years at Cambridge, he never received professional scholarly credentials in any of the fields that he became renowned for, such as zoology, biology, or geology. He started but never finished his degree in medicine. He had professionally educated friends, and he read excessively, but he did not receive the credentials that professional scientists had in his time. The only degree he had was a BA (Bachelor of Arts), ironically, in theology. He never did a doctorate, and was known throughout his life as Mr Darwin. It would be mistake to think that he knew the true value of his accomplishments and did not care for acknowledgment from the "licensed" scientists. We know that he did care about his official scholarly credentials and his personal status enough to pay £14 for his BA degree in 1831 and £12 to collect an MA (Master of Arts) in 1836 (combined, this amounts to about £3000 pounds in today's money). Symptomatically, on the cover of his history-making book *Origin of Species*

[13] Jim started to work as fuel inspector for the Bengal and North Western Railways (BNWR). More on this in the Chapter: Magic of two hundred pounds.

the author's credentials were stated as MA, although Charles did not do any additional study for Master's Degree, instead took advantage of the practice of the time to obtain automatically the higher degree after a few years of completing BA (with a payment, naturally!).

And make no mistake, Darwin did suffer from his lack of official credentials. Even the history-making paper delivered in the absence of both Darwin and Wallace on July 1st,1958, according to the best scholars of Great Britain, was worth of attention only because of the two names behind the paper, but these names were not those of Charles Darwin and Alfred Wallace, the names we cherish today, but those of Charles Lyell and Joseph Dalton Hooker, scholars with official academic credentials, who delivered the paper. It is still clear Darwin and Wallace, both without official credentials, were easily dismissed by the scholars with official credentials, as non-professionals.

The fact of Darwin's lacking official professional credentials is often missed in writings about the great scholar. Even David Sloan Wilson, a remarkably broadminded scholar with great respect for contributions in evolutionary science from amateurs and people from other spheres, does not mention Darwin's lack of official credentials. Instead, Darwin is contrasted with Alfred Wallace to highlight a division between a highly educated scholar and one without education (Wilson, 2007:222).

The fact that many pioneers of scientific progress did not have professional credentials is well-known, and I will not dwell on it here (I dedicated my 2020 book *The Human Story Behind Scientific Discovery* to this topic). Both Charles Darwin and Jim Corbett (like Alfred Wallace, Thomas Huxley, Thomas Edison, Leonardo da Vinci, and many others) were mostly autodidacts, people with natural disposition towards the search for new knowledge, people with

open and analytical minds. Passionate character and an open mind are much more important for a scholar than the completion of the highest degrees obtained in the most prestigious universities of the world.

Both Charles Darwin and Jim Corbett are inspiring examples for the countless passionate amateur self-educated researchers who, for various reasons, do not possess the official credentials of professional scientists, but through their research advance the scholarly field towards new horizons.

READING HABITS

A very important common feature of their childhood was that both Darwin and Corbett were avid readers, with a rich library in their parental homes. They could spend hours reading their favourite authors.

In Charles' words:

> "I was fond of reading various books, and I used to sit for hours reading the historical plays of Shakespeare, generally in an old window in the thick walls of the school. I read also other poetry, such as Thomson's 'Seasons,' and the recently published poems of Byron and Scott. I mention this because later in life I wholly lost, to my great regret, all pleasure from poetry of any kind, including Shakespeare" (Darwin, Autobiography, pg. 43-44).

Darwin read Shakespeare from an early age and loved *Odes to Horace* in grade school. In the summer of 1826, 17-year-old Darwin read *The Natural History of Selborne* by the Rev. Gilbert White. This book inspired him, gave him a greater appreciation for wildlife, and raised his interest for his studies of natural world. While in Cambridge (1928-31), he read various authors, among them William Paley›s *Natural Theology*, Sir John Herschel's *Preliminary Discourse on the Study of Natural Philosophy,* and Alexander von Humboldt's *Personal Narrative.*

After his 5-year voyage on the *Beagle*, where he was severely constrained in the number of books he could take, he tried to read metaphysics, which was fashionable at the time, but he found it uninteresting. Later he started reading poets Samuel Coleridge and William Wordsworth. Apart from his own massive reading bouts, Emma read novels to him every day. His favourite authors, to name

a few, were Jane Austen, Sir Walter Scott, Elizabeth Gaskell, and Lord Byron. His all-time favourite was *Paradise Lost* by Milton[14].

Darwin had a very active, and we could probably say, "aggressive" style of reading, He usually wrote plenty of comments in the books, expressing clearly his opinion. Charles treated books as personal items, would sometimes tear the massive tomes into sections to make them easier to carry around. He would also rip out sections from books that interested him. After Darwin finished reading a book, he would methodically go back through his notes and create abstracts. I was happy to learn about this, as I did the same thing many times with my own books – I mean writing plenty of comments and interesting information and my own ideas in the margins of the book. Sometimes I even glued empty pages on the back cover of the books for additional comments with page indications, when there was not enough space for my comments. I still have some books I treated this way – like the Russian edition of two volumes on human genetics by Vogel and Motulsky, Elizabeth Marshall-Thomas's several books, books on animal defence strategies, important works in psychology, and of course, books by Darwin and Corbett. But I never went so far as to break the tomes as Charles did. After all, there are not so many huge and heavy volumes in our days as there were in the 19th century…

How was Jim as a reader? In April 2018, I had the good fortune to see a few hundred books from Corbett's private library left behind by Jim and Maggie in 1947 when they left India for good in their Nainital home (many thanks to Nilanjana Dalmia, the current owner of Corbett Nainital "Gurney House" and the Corbett family library, gracious friend of all Corbett researchers and fans). Probably, they took their dearest books with them to

[14] Among the very first writings of Corbett, his second in fact, was entitled *A lost paradise*, which appeared in a periodical *Review of the Week* of 1936.

Africa, or, they had to leave virtually all books behind. (Amazingly, we still saw a copy of one of Jim's favorite, Cooper's "Pathfinder," in Jim's Nainital house library!). There were quite a few books left that were signed by Jim, and some signed by Maggie, but there was nothing like the intense notes and comments that Darwin's private books have, in them.

It seems that though we know that Jim had favourites titles he did not treat them as his personal belongings, by jotting in them, probably keenly aware of other readers in his large family[15]. Unfortunately, we cannot say for sure if Corbett read any of Darwin's books, although this is highly possible since there is some evidence that they were available in India in the early 20th century as the editor of this book has seen at least two very old editions of Darwin's titles, dated 1924 and 1936, in the book collection of late Donald Anderson (son of Kenneth Anderson, referred to, in Introduction).

[15] The culture of reading was deeply rooted in the Corbett family as we can observe from at least two of his elder brothers; Charles Doyle became an author himself and cited several authors in his piece, while Maurice Corbett was reading and reciting Homer's hymns and verses at a very young age. (See *Maggie's Notes* in *Behind Jim Corbett's Stories* vol 2, 2020:243)

WHERE THEY PREFERED TO LIVE?

As true nature lovers, both Charles and Jim hated living in the bustling city. As we know, in 1842 33-year-old Darwin bought and remodeled the house in Dawne, Kent, far from the city centre, spending his remaining years there. I can testify that, for a Darwin fan, visiting his house in Dawne (I went there in 2016), seeing his old working armchair with wheels, his closed corner with a foot-bath for his bouts of ill-health, and walking on the path he used to walk every day was a totally thrilling experience.

Corbett lived most of his life in India between two houses – one in Nainital (the house that his parents built when he was 6 years old, after the devastating landslide in 1881) and another in Kaladhungi, first in the Arundel "castle", and then in a house Jim bought and remodelled in 1920/21. During the last nine "African" years of Jim's life he and Maggie lived on the outskirts of the Kenyan town Nyeri, next to the Aberdare National Park with a spectacular view of Mount Kenya, in Paxtu cottage, built for Lord Baden-Powell, the founder of the Boy Scout movement. This house is a haven for nature lovers. Incidentally, not many know, that Baden-Powell was quite critical of Darwin's ideas on evolution. But I am sure Darwin's ideas about animals and human evolution were closer to Jim's heart.

Since I visited all three houses where Corbett lived during most of his life, I can testify that his winter home in Kaladhungi, which was subsequently turned into a Corbett Museum, is a highly worthwhile place to visit for Corbett fans. But the museum is not as rich with original Corbett-owned memorabilia as his summer home in Nainital is.

Corbett's Nainital house today is privately owned and beautifully maintained by Nilanjana Dalmia, and contains hundreds of the

Corbett family belongings, including their books, Maggie's piano (see the photos) original furniture, including Jim's writing table, Jim's fishing boat, and many of Corbett's minor hunting trophies[16].

Corbett's house in Nyeri, Kenya, which I visited in November, 2019, has also maintained the feel of original haven that attracted Jim and Maggie, although now the place is totally dominated by the presence of the initial owner of the house - Lord Baden-Powell, as it is a prime place for pilgrimage of thousands of enthusiasts of the Scout movement.

[16] These includes trophies from his hunts of India, Kashmir and Africa. But his major trophies, mainly the man-eater skins, have been taken to Kenya when they left India.

MAGIC OF TWO HUNDRED POUNDS

It is fascinating that the amount of money, 200 pounds (in the case of Charles Darwin) and 200 rupees (in the case of Jim Corbett), played a very important, possibly even crucial role in the lives of both of our heroes, albeit with vastly different reasons and consequences.

Let us start with Charles Darwin. Hardly any Darwin biographer or even more-or-less informed Darwin fan would dispute that the voyage on board the *Beagle* was the defining moment of Charles Darwin's life. It is very difficult to predict "what would have happened" to 22-year-old unemployed Charles Darwin, had he not had a once-in-a-lifetime opportunity to travel round the world and do what he passionately loved to do – describe and analyse the geology and life forms in different parts of the world. To Charles' great joy and pride, Henslow encouraged him with the following words: "Don't put on any modest doubts or fears about your disqualifications for I assure you I think you are the very man they are in search of." Charles' "disqualification" clearly alludes to his lack of official educational credentials, discussed earlier.

So, this rarest opportunity hinged on the fact Darwin was expected to pay his own passage. And the fee was very high – 200 pounds for the entire trip.

No need to laugh. Roughly, each of 1830 British pounds equals more than 100 pounds today. So, the amount that Charles needed for this dream trip today would be about 25 thousand pounds. Not a small amount of money by any accounts, although still a bargain for a two-year (as it was initially planned) trip.

Well, small or large, unemployed Charles did not have the required sum of money. So, the only hope was that his wealthy father, Robert, would bless his wish to go and pay for the trip. But

his father, as we probably remember, did not have very favourable opinion on his good-for-nothing son. For him, paying for the long voyage for his son, who cared only for shooting and hunting was simply a waste of money. So, when excited Charles showed his father the golden letter-invitation, his father firmly declined to let him go in the form of a list of eight logical reasons against the trip. As a result, on the same day, immediately after talking to his father, and obviously with a heavy heart, Charles wrote a negative reply to Henslow, informing him that he had to decline the dream offer.

But luckily for Charles and for the progress of biological science, Robert left a small lifeline in his seemingly absolute refusal. He proposed that if Charles could find a single man of a good reasoning who would support Charles' aspiration to go on this trip, he would pay for the trip. We should be eternally grateful to Josiah Wedgewood, Charles' uncle, and the father of his future wife, Emma. Charles immediately went to see Josiah to talk about his problems. Josiah whole-heartedly supported Charles' aspiration. He wrote a long letter to Robert supporting the idea and answering all eight points of his arguments. In addition, he even took pains to travel to see Robert and inform his brother-in-law, that he strongly supported Charles' desire to go on this trip. When Josiah and Charles arrived to see Robert, he had already read the letter, and greeted his brother-in-law and son with the words he rarely uttered: "I've changed my mind". There were a few other problems before Charles stepped aboard the *Beagle*, but the biggest obstacle was behind him. And of course, Robert agreed to pay the coveted 200 pounds.

The rest, as they say, is history.

Jim Corbett's case was very different. First, it was not 200 pounds, but 200 rupees. And instead of asking for this amount, as Charles Darwin had to do, Corbett had this money freely at

hand, and he gave it away. At the end of 19th century, when this happened, 200 rupees was of the equivalent of 1500 pounds today (or 155.000 rupees today). Again, we can all agree that this was not a small amount of money, and this small fortune had an interesting story and led to an even more interesting sequel.

So, what happened? Why did Corbett have free money on his hands in 1896? Corbett, unlike Charles Darwin, worked since he was an adolescent, even quitting school prematurely. In 1894 Corbett joined the Bengal/North Western Railways (BNWR) as a railway fuel inspector at Mankapur. The job was temporary and ended eighteen months later, in 1896, when Corbett got a new contract as trans-shipment inspector initially at Samaria Ghat for luggage transfer of the ferry crossing over the banks of the Ganges River after satisfactory completion of his previous assignment in Mankapur. Corbett got the recommendation for a new, better job, as his employers were impressed with his honesty on his last assignment.

This is what happened: four Indian labourers came one evening to Jim Corbett (who was their master-contractor) and informed him that they had to quit their jobs immediately and go to their faraway villages for good. Corbett was not against letting them go, but he needed to pay them for their work. For this he needed papers that were unavailable at the time, and therefore could not reckon what sum they were entitled to be paid by the company. The four labourers told Corbett they had already calculated their earnings and designated the sum. Corbett, as always, trusted them completely and paid the labourers the named sum without reservations. Later, as Corbett looked at the papers, he realised that the labourers had miscalculated their pay, and took less amount than they were entitled to. So, Corbett was left with these free and unclaimed 200 rupees payment.

What happened next? As a profoundly decent employee and employer, Corbett went to his company bosses and told them the story of these unclaimed 200 rupees, suggesting that the company should keep the money. Honesty pays. The company bosses, deeply impressed by this gesture from their young employee, offered Corbett a new contract, a better job, with better salary and more responsibilities.

So, Corbett's 'magic 200' resulted in him staying in his new job for more than 20 years, providing him and his family with a substantiable income, until the end of his working days in 1917. And there was more. As his sister Maggie pointed out in Jim's biography[17], it was with his income savings that Jim purchased a derelict village, Choti Haldwani, restored it and welcomed poor people of the foothills, giving them incentives to settle as agricultural tenants. The latter were freed from rent and this, until both Jim and Maggie passed away between four to five decades later. This village has ever remained as a model of a successful and environmentally-sustainable community.

The magic sum of 200 pounds came back one more time in Darwin's life, and this time the sum was destined to help Charles' dear colleague, co-discoverer of the principle of natural selection, Alfred Russel Wallace.

Unlike Darwin, who came from an upper-middle-class family and enjoyed a life free of material need, or a need to work for a living, Wallace was from a financially insecure family and had to work most of his life. In the second half of his life Wallace was particularly struggling. Never a financially-minded man, he found himself looking for other sources of income, including do-

[17] See the chapter "Notes and Biographical Sketches" by Maggie Corbett in Behind Jim Corbett's Stories, vol. 2, 2020.

ing editing work for Darwin's and Lyell's writings. For several years Darwin, well aware of Wallace's financial problems, was lobbying hard for awarding a state pension to Wallace for his outstanding contributions to science. Finally, in 1881, a couple of years before Darwin's death, he managed this. Wallace was awarded a steady governmental pension that made his life financially much easier. Wallace, 14 years' Darwin's junior, lived much longer, until the age of 90 (he died in 1913), and was very grateful for Darwin's help for long 32 years.

The worth of Wallace's pension was 200 pounds per year.

STRESS AND ADVENTURE IN CHARLES DARWIN'S LIFE

We are now probably at the crucial section of life of both heroes of this book. They had amazing life adventures, but there were big differences between them as well. Let us first discuss Charles Darwin's share of travels and adventures, particularly as I believe this fascinating topic can reveal important insights into his personality and life.

Most of his life, Darwin lived in the UK as an armchair scholar, for his travel and physical adventures were over by the time he turned 28. But of course, before settling to an armchair life for good, Darwin took a very special trip, and boy, what a trip that was! Probably one of the best known in scientific history, the epic five-year-round-the-world voyage on the *Beagle*, the trip that changed not only his life, but irreversibly altered our understanding of life around us. A lot has already been written on this trip, so I will not bother with another description of the places he visited and the discoveries he made. Instead, I want to pay attention to another detail and will attempt to make a far-ranging suggestion.

The crux of my suggestion is that, in my opinion, by natural disposition, Charles Darwin was never an armchair scholar. Instead, he was more of an active adventurer, thriving while he was visiting various countries, riding horses, shooting animal and bird species for his collection, and generally having a life full of active physical, not just intellectual, adventures. And I propose that Darwin's getting a mysterious disease that plagued his health after the trip should be attributed to the fact, that settling into the sedentary life of an academic was against his natural character. In other words,

I suggest that for most of his life Charles was psychologically suffering from his physical inactivity.

> "Wait a minute…", an informed reader might ask, "this simply cannot be true, as we know very well what Darwin wrote about activities and excitement in his life". Here are Darwin's own words: 'I have long found it impossible to visit anywhere; the novelty and excitement would annihilate me.' So how do these words go with this sensational claim that Darwin thrived on travel and adventures?"

Well, we must consider that these words were used by Charles to decline invitations to social gatherings in latter part of his life. What I propose is that he hated conventional social gatherings but loved true physical activities and even danger. Let me remind readers of three small examples from his life.

Example 1. It is 1853, Charles is 44, well into the years of dreadful bouts of sickness, and the time of avoiding social gatherings. There are still six more years to go before, prompted by Wallace's letter, Darwin decides to publish the most important book of his life. This year was marked by rising political tension between two world empires, Britain and Russia. Russia's ambitions to obtain new lands from struggling Turkey and strengthen its position in the Balkans and around Mediterranean-Black Sea regions prompted Britain to flex her muscles and start preparing for war against Russia. In 1853 Britain organised massive military manoeuvres in Chobham Camp in Surrey. These were the first large-scale manoeuvres in Britain since the Napoleonic Wars. For almost the entire summer of 1853, from 14 June to 25 August, 8,000 men, 1,500 horses and 24 guns were involved in field operations and parades under the command of Lieutenant-General Sir John Colborne, 1st Baron Seaton. These activities attracted large crowds of spectators, including

royalty and foreign dignitaries, and were recorded in numerous paintings and prints. The Illustrated London News published a diary of each day's events.

Darwin's family also went to watch the manoeuvres for three days. There were twelve small cousins in the party, eight of them boys. According to the records, when Darwin's family arrived,

> "Battle had already commenced, with the bloodcurdling shouts and thundering mounts of over 10,000 men the grandest war games yet staged by a peacetime British army. For a moment, in fact, it became all too real. The Darwin-Wedgewood contingent found themselves being charged by the 13th Light Dragoons and had to flee for their lives." (Desmond & Moore, 2009:417).

And how did Charles feel about these vigorous physical activities and excitement? Charles, quoted above as reluctant to attend any gatherings and excitement, apparently loved the experience! According to Desmond and Moore, arguably the best of Darwin's biographers, "It was part of the thrill that made these three happy days unforgettable. And the one who enjoyed them most was Charles." (Desmond & Moore, 2009:417. By the way, this information was taken from Darwin's health diary).

Example 2. Another indication of Charles' loving the active life and adventures, comes from the historic trip on the *Beagle*. While Fitzroy was busy measuring various features of the east coast of South America, Charles, accompanied by several local gauchos, crossed the continent from east to west, including crossing the Ands and reaching the Pacific Ocean. And it is telling how much he enjoyed the rough trip. Darwin's biographers tell us that "Darwin was becoming quite a gaucho himself. The rough-riding suited him perfectly. At night, crouched around the fire, eating roasted

game, and after smoking a cigar he would "sleep as comfortably with the Heaven for a Canopy as in a featherbed…" (Desmond & Moore, 2009:141).

Anyone who appreciates and loves travel and adventure would envy Charles…

Example 3. Still another story is connected to the *Beagle's* being in South America. In July of 1932, when the *Beagle* arrived in Montevideo, there was unrest among local Afro-South-American troops, so the local police chief asked the *Beagle's* captain Fitzroy to assist the police with his crew members before the armed forces arrived. So, Darwin, together with sailors and other crew members, with his two personal pistols dangling from his belt, was walking around during the unrest. Sometime later, when the troops arrived, shooting started. So, what was Darwin's reaction to this strictly non-academic activity? "Admittedly, he derived 'a great deal of pleasure in the excitement of this sort of work,'" (Desmond & Moore, 2009:127).

Of course, sceptics might note that two of these three stories occurred in Charles' early to mid-20s, when he was a different man, and this is probably correct, but in 1853, when Darwin was already settled down, and long suffering from his mysterious and debilitating sickness, he showed a great joy to a similar kind of action-related excitement. So, to my mind, in the later part of his life Charles dreaded conventional social gatherings, but was secretly craving real, physical adventures and excitement. I would even go as far as to declare that Dr. Gully's water treatment, by far the most effective for his condition, had a positive effect because they included invigorating physical activities, like showering with freezing cold water and vigorously rubbing his body with wet towels.

Let us ask another question: why on earth did Charles Darwin condemn himself to suffering from physical inactivity, if his character was naturally craving for travel and physical adventure? To answer this difficult question, I suggest looking at Charles' earlier life and the dreaded negative attitude of his father concerning Charles' lifestyle. I suggest that Robert Darwin's bitter words that Charles remembered painfully clearly for life, had a profound effect, turning Charles from the active adventurer (that he naturally was) into an armchair, "serious" scholar.

It is impossible to be sure about the real reasons behind Charles Darwin's mysterious illness that plagued a big part of his life. There are lots of various theories, conference papers, and serious discussions about his condition, without a single dominating reason behind it. In my opinion, we should not exclude the possibility that the "mortifying" negativity of Robert Darwin's attitude towards Charles was central to his condition. I propose that Robert's negative attitude toward his son worked simultaneously in two very different, almost opposing, ways:

(1) On one hand, Robert's critique made Charles abandon the physically active life he loved and condemned him to suffering from an array of psychosomatic symptoms.

(2) On the other hand, probably the same devastating critique from Robert made Charles so religiously dedicated to the purely intellectual "serious" activity he became famous for.

Stressful memories can work both ways simultaneously – they can cause both pain and negative consequences, and contribute to a person's psychological growth person as well.

Well, we shall never know "what might have happened" if Robert Darwin had not been so critical of young Charles: would Charles ever want to become serious from his passions for adventurous life, like hunting and horse-riding? Or would he still become a revolu-

tionary scholar, but manage to maintain a healthy balance between active physical and intellectual lives, thus avoiding the debilitating mysterious sickness that plagued him?

STRESS, ADVENTURES, AND SLEEPING HABITS OF JIM CORBETT

We do not need to talk about Jim Corbett's experiences too much to come to an obvious agreement that he had an exciting life full of travels and adventures. It is true, that unlike Darwin, Jim never got to travel around the world, and never visited any such faraway places as America or Australia. But his travels to Europe, Africa, and, of course, Asia, were filled with exciting events that were distributed throughout his life. Unlike Darwin, who finished all his travels and adventures before he turned 30, Jim Corbett had a particularly rich life filled with adventures after 30.

We are not going to go into the details of his thrilling adventures when he was tracking man-eating tigers and leopards in the mountainous terrain of the Indian-Nepalese border regions. We probably need only mention that when he went after his first man-eater, the notorious Champawat tigress, in 1907, Jim was 32, and when he went after his last man-eater, the Thak tigress, he was 63. There can be no doubt that Jim Corbett had a life full of travel and physical adventure. He was physically active all his life, and in an excellent shape until his bouts of sickness from his mid-sixties to the very end. But there was something else that bothered him, something that remains mysterious in his life and health, very much like the mystery of Charles Darwin's health. So let us discuss now Jim Corbett's health. Was anything really bothering him?

Corbett fans naturally become defensive as soon as they hear someone discussing any possible health troubles of their hero. I have experienced this defensive reaction first-hand. This is understandable. Talk to any of the Corbett readers, or read any of the existing Corbett biographies, and you will quickly be assured that

Jim had an exceptionally strong constitution and nerves of steel. It was his health that permitted him inhumanly strenuous days and weeks of following man-eating tigers and leopards on foot, with long stretches of time without food and sleep.

But there is an obscure detail, often neglected by his biographers and fans, that is still shrouded in mystery, and I would like to discuss this detail. More precisely, we are going to discuss Corbett's sleeping habits. I believe there are some particulars that warrant close attention.

Let me be direct and openly declare from the very beginning that Corbett himself never discussed any problems with his sleeping, as he generally never liked to talk about any problems he was facing. So, we need to search for information on this topic throughout his stories and sketchy bits of information from his biographies, and surviving memoirs about him. Such details are probably best described in his man-eating stories. In these fully documented stories Jim was trying to give a complete account of his thrilling hunts, packed with dramatic events and details, often with precise dates, names of places and people. So, the time and place of many of his sleeps (or sleepless nights) were among the essentials of the story, as he had to spend time in the villages or wilderness areas where the man-eater big cats were taking their victims. So, what can we say about his sleeping habits? Anything unusual?

In Corbett's man-eating stories, a careful reader will come across many instances when Jim preferred to spend the night in the open, outside houses, even in territory where man-eating tigers and leopards roamed. This was an obviously very dangerous conduct and was rightfully considered by the local villagers as "crazy" behaviour by a white "sadhu"[18].

[18] For all his deeds, mainly generosity and bravery, Corbett was considered by

Symbolically, Corbett spend the very first night of his first man-eater hunting expedition in 1907, May 4th, in the open. He was in a village called Pali, the place of the recent 435th kill by the infamous Champawat tigress (the most prolific man-eating animal in documented history as per the Guinness Book of Records, edition of 1975). Corbett vividly described this night, his regret for his silly decision to stay outside the whole night, sitting on the ground with his back to a tree, and the terror he felt throughout. For the next few nights, Corbett decided to go inside a village house, but he still left the door wide open, jamming it with thorn bushes. In short, he obviously hated sleeping in closed rooms.

This kind of behaviour is clear in all his man-eater stories. When following the deadly Rudraprayag leopard, arguably the most famous of all man-eating big cats, known to take its victims while asleep in the middle of the night, straight from their beds, Corbett still preferred to sleep in a tent, or, in one case, on an open veranda with a flimsy lantern light, although he knew the leopard had been following him for many miles and was still around, watching carefully, and waiting for him to fall asleep. All his servants wisely chose sleeping in the closed house with closed windows, as nothing else would guarantee their safety from the deadly leopard. Jim's legendary friend Ibby (Sir William Ibbotson) stayed with him on the open veranda, and they both shared sleeping and vigilance, aided by a local stray dog, another typical prey for leopards.

Apart from sleeping out in the open or in houses with open doors, Corbett also preferred staying in tents instead of houses. For many hunts Corbett used his famous 12lb. tent, although it could not provide a secure defence from hungry man-eater big cats.

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local people of Kumaon as a 'sadhu' which in English would possibly mean sage, saint, or holy man.

Probably even more strangely, according to Maggie, his sister and closest lifetime friend, Jim preferred spending nights in the tent even when he was at his own home in Kaladhungi. Now, that is truly strange. You do not have many humans staying in tents pitched next to their houses. In his summer house in Nainital, Jim would sleep inside but with the windows wide open, irrespective of the weather. And the nights can be very chilly in Nainital even in the hot months, I can testify myself....

These unusual habits of sleeping in the open or in tents hardly in themselves indicate the presence of major problems, but Corbett had many more unexplainable and troubling night-time habits as well. Some of these nights are mentioned in his published stories and several biographies. Let me discuss arguably the best known, recognised by Corbett fans as the "night in Champawat bungalow" from the first story of his first book, bestselling adventure classic *Man-Eaters of Kumaon*.

While hunting his first man-eating tiger, the Champawat tigress, Jim Corbett spent this particular night in a Champawat bungalow on May 10-11, 1907. During that day (May 10th), Corbett covered many miles to check a report of an alleged tiger kill but found that it was actually a leopard that had killed and partly eaten the calf. Corbett returned to the bungalow where he was going to spend a night together with his men and the Tahsildar[19] of Champawat and he later narrated the following in his first book:

> "…On returning to the bungalow I found the Tahsildar was back, and as we sat on the verandah I told him of my day's experience. Expressing regret at my having had to go so far on a wild-goose chase, he rose, saying that as he had a long way to go he must start at once. This announcement

[19] A government employee who cumulates the function of head of local district, law enforcer and tax collector in rural India.

caused me no little surprise, for twice that day he had said he would stay the night with me. It was not the question of his staying the night that concerned me, but the risk he was taking; however, he was deaf to all my arguments and, as he stepped off the verandah into the dark night, with only one man following him carrying a smoky lantern which gave a mere glimmer of light, to do a walk of four miles in a locality in which men only moved in large parties in daylight, I took off my hat to a very brave man. Having watched him out of sight I turned and entered the bungalow. *I have a tale to tell of that bungalow but I will not tell it here, for this is a book of jungle stories, and tales 'beyond the laws of nature' do not consort well with such stories.*"

This intriguing last sentence in italics is well known to all Corbett fans. Despite his promise, "I have a tale to tell of that bungalow," Corbett never returned to the events of that night in later writings or even in private letters, despite being urged of doing so by his fans, leaving the interpretation of his words to his readers.

With Corbett's immaculate reputation as a trusted observer of minute details and facts, and a certain mystery behind these words, this event has long caused hot debates among Corbett fans and researchers. Importantly, new information about the night's events became public in the first decade of the 21st century. Let us discuss this new source of information.

According to Maurice Nestor, son of Ray Nestor, Corbett's nephew, Corbett was not alone in the bungalow, for his faithful servant Bahadur Shah Khan was there. Bahadur was in the front part of the bungalow[20], while Corbett was sleeping alone in the room. The other men from Corbett's party were in the firewood store behind the building. According to Bahadur, the Tahsildar left because he

[20] The bungalow was partitioned into two rooms and a veranda.

knew that all would not be well in that bungalow, which was why he preferred to walk through the man-eater's territory rather than stay at the bungalow. According to Maurice,

> "Bahadur later reported to one of Corbett's sisters (either Maggie or Mary Doyle, his stepsister) that he heard Corbett being very noisy in his room, and later opened the door suddenly and came running straight to the veranda. Upon joining his master, Bahadur found him shirtless, with heavy drops of sweat everywhere, his hair completely wet with sweat also, breathing heavily. That woke up the other men who came to attend their master and Corbett simply told them he'd rather spend the rest of the night outside with them instead of inside. According to Maurice's words, the second night [the night before the killing of the man-eating tiger on May 12] was also spent by Corbett at the bungalow, but instead of sleeping inside the room, he slept on the veranda, with his men setting up camp with a nightlong fire to 'cast away' evil spirits. Bahadur, who was the only Muslim in the party, tried not to believe that something strange or unnatural happened, and did not report it as a supernatural experience to the family."

So, in this interesting memoir, we suddenly have many more important details of the night – Corbett was terrified by 'something" to the extent that a man with his steel nerves rushed from the room, after removing his shirt, and was covered in sweat.

Before we discuss these details, I want readers to know that this was not a single instance event in Jim Corbett's life. He had at least one more recorded similar experience. According to the major Corbett's biographers, Corbett was on war duty with another government officer when they spent the night in the Raja's[21] house.

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[21] Raja means king. However, local rulers, or rather very large landlords were also

Corbett was told to leave a particular room alone and locked, as it had a "bad reputation," but he insisted on sleeping in it. During the night his companion heard a ruckus in the room, and the next moment Corbett dashed in through the connecting door out of breath ("panting for breath," Kala, 2009:76) and sweating, and slept the remainder of the night in his companion's room. At breakfast next morning, he was asked what had happened, which made him very upset, and he abruptly left the table and asked never to be reminded of it again.

The sudden waking in the middle of the night, something causing an utter and unexplainable terror, accompanied by heavy breathing, heavy sweating, and no clue for the reason is apparent in both cases. Quite understandably, among Corbett fans, particularly in India, these events are often proof of confirmation of the existence of unidentified evil forces witnessed first-hand by such a trusted man. Corbett himself wrote in one of his last books: "… though I claim I am not superstitious, I can give no explanation for the experience I met with at the bungalow while hunting the Champawat tiger, and the scream I heard coming from the deserted Thak village." (Corbett: *The Temple Tiger and more Man-Eaters of Kumaon*, OUP 1954, the chapter "Temple Tiger").

As a lifelong Corbett fan and researcher, I was intrigued by the Champawat bungalow incident like many others, although, interestingly, in the Georgian (and Russian) translations of the book that I initially read, the couple of lines about this event were missing – apparently strict Soviet censorship determined that such words, alluding to "non-material forces", should not be in a book for atheist Soviet readers. In 2018, while in India with a group of Corbett researchers, investigating Corbett-related sites, I even spent a night

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called Raja by their tenants.

in that same bungalow[22] where Corbett had described the above experience, with two other friends. All three of us had an exciting, albeit a peaceful night. So, can any possible scholarly explanation be found?

In a special research chapter entitled "*Mystery of Champawat Bungalow"* (published in *Behind Jim Corbett's Stories* Logos 2016), I proposed that throughout his life Jim Corbett probably suffered from closet claustrophobia, causing his troubles sleeping in closed rooms, and triggering sometimes vivid nightmares and panic attacks. His claustrophobia most likely was the result of a catastrophic event that took place in Jim's early childhood. On September 18th, 1880, five-year-old Jim, together with his family, witnessed a massive landslide that devastated part of Nainital and buried more than 150 people alive. To make things worse, Corbett's family saw the disaster up close (they lived next to the devastated region and easily could have been buried as well), and many of the victims were their good friends. Crucially for our discussion, Corbett himself was not aware of this psychological condition, as the claustrophobia was not a part of public knowledge at the time.

Some of the symptoms of claustrophobic panic attacks commonly known today include:

(1) fear of imminent death by suffocation,

(2) desire to remove clothing to alleviate symptoms,

(3) desire to be in open space,

(4) heavy sweating,

(5) being out of breath

Now, if we read once more Maurice Nestor's description of Corbett's behaviour on that night in the Champawat bungalow, we notice that it is very consistent with the symptoms of severe claustrophobic panic attacks: he was (1) sweating very heavily, (2)

[22] Extant same building at same place, but renovated.

out of breath, (3) in a rush to get out of a closed room, and probably most importantly (4) he removed his clothing (his shirt) during the attack: "Upon joining his master, Bahadur found him shirtless, with heavy drops of sweat everywhere, his hair completely wet with sweat also, breathing heavily."

We do not know whether Corbett had a feeling of approaching death by suffocation, as he never spoke of his feelings and his experiences, but the symptoms he displayed strongly suggest that in the Champawat bungalow (and in the Raja's house) he had a claustrophobic panic attack – a feeling of being unable to breathe (it's not a sensation of constriction around the neck, which choking suggests, but a panic of running out of air) and the fear of imminent suffocation.

Long discussions on the topic for many years, and also the behaviour of Corbett-related people gave birth to another debate among Corbett researchers: the strange experiences connected to Jim's sleep were possibly kept a deep secret inside the family, and that's why, when the above-mentioned description of the night's events (coming from Jim's servant, Bahadur, via Jim's nephew, Maurice Nestor) became public in 2009 on social media, the person who made this memoir public (and who knew Maurice Nestor personally), was most likely asked to remove the story from public media. So, a few days after publishing this description, the person in question removed the text from the Facebook site, and later denied ever making this description available, although the sensational description, available on a FB page for a few days, was copied by fans and later appeared in print as well.

As we can see, Corbett's general preference for staying outside even when in man-eater territory, sleeping in a tent while at home, and his well-known hatred for constraining cloths, all give indications that Corbett might have had deep claustrophobic

fears since childhood after witnessing the catastrophic landslide in Nainital in 1880.

It is widely believed that additional stress factors contribute to the possibility that a person will suffer a claustrophobic panic attack. In the Champawat bungalow Corbett experienced a powerful stressor, as he was following the trail of a man-eater for the first time in his life, possibly with consideration of a macabre detail (particularly sensitive for people with claustrophobic fears), that big cats – tigers, leopards, and lions – kill their victims by suffocation.... that is, big cats target their prey's throat with their powerful canines and do not release their hold until the prey stops breathing.[23]

Corbett himself also indicated that a close encounter with tigers *affected his normal breathing*. Here are his words: "I do not know how the close proximity of a tiger reacts on others, but me it always leaves with a breathless feeling due possibly as much to fear as to excitement and a desire for a little rest" (Corbett, 1944: 136, story of Mohan Man-eater).

So, I suggest that it was mostly because of his traumatic childhood experience that Jim Corbett developed a closet claustrophobic fear of suffocation, a condition that would manifest rarely, only under high levels of stress and in closed buildings. Most likely Corbett himself was unaware of his condition, and that's why his love of outdoor sleeping on one hand, and his dislike of formal tight neckwear, was usually attributed only to his love of nature and outdoor living.

With the recognition of this condition that probably troubled Jim Corbett on occasion, we can gain a fresh insight why he preferred sleeping in a tent even at his own house in Kaladhungi (See,

[23] This applies mainly to large ungulates although not strictly for predation on humans or smaller prey as a head bite may suffice to cause death.

for example: “When at Kaladhungi, he preferred to sleep in his tent rather than his bedroom and, in Naini Tal, he slept in the house but with the windows wide open regardless of the temperature outside” (Booth, Carpet Sahib, pg. 158).

Of course, on rare occasion Corbett had to wear claustrophobic clothing, including the much-hated tie and suit. This was a normal requirement for a Lieutenant Colonel in the Indian Army, which he was, but also on the occasions of formal meetings with members of British high society, including District Commissioners, Governors, the Viceroy and later, even the British Royal family. Else, his love of outdoor living and free casual clothing was obvious.

Corbett fans might also remember that he did not actually sleep inside the Tree Tops Hotel rooms, even when he accompanied the Royal couple in Kenya on 5-6 February 1952. Instead of sleeping inside the hotel, although aged 76, Jim preferred to spend the night outside, sitting on a staircase, watching over the safety of the 25-year-old Princess Elizabeth. As we know, this was the historical night when the young princess became the Queen of the British Empire, Elizabeth II, with Corbett guarding her sleep. Corbett must have provided a good beginning to Her Majesty, the longest serving British Monarch, who died very recently, and who was happy to be reminded about her 1952 meeting with the legendary hunter and author.

Corbett’s traumatic childhood experience and psychological state possibly also explain why he was so dedicated to hunting man-eating tigers and leopards. On one hand, it was a psychological remedy for his own condition, as man-eating big cats kill their victims mostly by suffocation, and Corbett was facing his biggest subconscious fear by eliminating these powerful animals in direct confrontation.

On the other hand, as a deeply compassionate person, Corbett wanted to do all in his power to end the human suffering and death brought by the man-eaters: death in the form of suffocation, his biggest personal fear. And still, with all the conscious and subconscious fear of the man-eating big cats, Corbett's stories are very clear about his overpowering love for tigers and leopards, and compassionate feelings even towards these dangerous man-eating cats, who often started attacking humans after human-inflicted disabling wounds.

Apart from claustrophobia, there may be another probable cause for Corbett's mysterious night-time experiences. This reason is also related to the same catastrophic childhood event of 1880. The alternative suggestion is that after witnessing the landslide, for most of his life Jim suffered Post-Traumatic Stress Disorder (PTSD). This idea came from a member of Jim Corbett International Research FB discussion group, Australian Wayne Welch, a professional soldier and sufferer of PTSD for over 40 years, who recognized PTSD symptoms in Corbett's writings and the description of the event at Champawat bungalow. This idea is still in need for more research, but it is clear that both of these suggestions connect Corbett's state with the early childhood trauma. The possibility of both of these conditions co-existing is also probable.

Let us now make a general conclusion on the importance of stressful events in life of Charles Darwin and Jim Corbett. We can say, that just as Darwin was probably affected by the overwhelmingly negative attitude from his dominating father and managed to channel his stress into religious dedication to academic work, Corbett also managed to channel his traumatic childhood experience into positive energy, becoming a dedicated defender of all living organisms in need of defence and care, both humans and animals.

As humans, we all have various physical and emotional stresses during our lives. The main difference between us is how we react to trauma – becoming bitter and overwhelmingly self-absorbed, even narcissistic, or, conversely, becoming more compassionate towards others who need help, trying to make this world a better place. Both Charles Darwin and Jim Corbett provide great examples of channelling their trauma into positive energy.

WORKING STYLE, MEMORY, MISTAKES, AND SPECULATIONS

Both Darwin and Corbett were original thinkers with a good eye and sharp mind. For them everyday life was full of exciting events from which to obtain first-hand experiences. They were fascinated by the living world around them, marvelling at the beauty and singing of birds, the variety of botanical and animal species. There were major differences between them as well, particularly in how they organised their working process.

Charles kept great number of diaries and books to record comments for various ideas, like the famous diary about his own children's development. On the other hand, Corbett did not have a steady habit of journaling, although his letters to his mother and later Maggie can also serve to us as his records. But still, for his documented stories, written much later in his life, Corbett relied mostly on his memory. Even in cases when he could relatively easily check the details of some of his hunts from the newspaper clippings, or his own letters to Maggie after the hunts, he still relied on his memory. So, some details, like the dates of some of his hunts for man-eating big cats, available in the newspaper clippings and his letters, are absent from his stories. All these materials, carefully collected during many decades by himself and his sister Maggie, are now found at the archive library of the Oxford University Press (OUP) in the UK and most of them are published in two volumes of *Behind Jim Corbett's Stories* (2016, 2020).

For example, let me mention some of his misses and mistakes in detail.

Corbett did not provide precise dates, apart from the year (1907) of the epic hunt for his first man-eater, the Champawat

tigress. This tigress, after being severely wounded in its jaw by a carelessly fired gunshot around the year 1899 in Nepal, became the scourge of the villagers, who in retaliation, rounded and drove her across the border to India. In a clipping from the central newspaper of the time, "*The Pioneer Mail*", dated June 16, 1907, which was found at the OUP Corbett archive, mentioned above, we now know that the killing date was May 12, 1907.

With his second man-eater, known as the Muktesar man-eater, even the year Corbett provided in the story (1910) is incorrect, as another newspaper clipping, this time from the local weekly "*Lake Zephyr*" (21 April, 1909) states that the hunt and killing took place in March 1909 (still no precise date available). Likewise, there is no precise date for his third hunt, the man-eating leopard of Panar, which claimed an impressive number of about 400 victims. We have no newspaper clipping nor letter to Maggie about this hunt, but study of the story, with only a precise date for the start of the expedition, detailed reconstruction of the events, and the analyses of lunar phases with reference to Corbett's narrative of the hunt, as researched by Vandana Abhade (member the Jim Corbett International Research Group FB page) points to 22 (or 21) September 1910.

Corbett's fourth man eater was arguably the most famous man-eating animal in recorded history, the man-eating leopard of Rudraprayag. This leopard killed "only" 125 victims, as per Government records, but terrorised the huge area of pilgrimage for hundreds of thousand of Hindus towards sacred religious sites for eight long years. Also known to break into houses after sundown, the leopard often took victims from their beds in the middle of the night and dragged them as noiselessly as possible such that their disappearance appeared mysterious and often credited as the act of a supernatural being. In this story Corbett provides a precisely

recorded date of the successful end of this long hunt, the late evening of May 1st 1926.

The next hunt, probably the most amazing, was Corbett's personal favourite. Incredibly during this hunt Corbett was greatly incapacitated, suffering from a huge abscess in his head, face and neck that closed one eye, deafened him in one ear, and gave him excruciating pain (The abscess resulted from someone carelessly firing a high velocity rifle next to Corbett's ear, during a hunting trip a couple of months earlier). In such a condition, instead of remaining under constant medical care in a clinic, Corbett went up after the tigress, "to tide up his bad time" as he revealed. He followed the wounded man-eating tigress for a week, on foot, during the day and sometimes at night. During one of these nights, his abscess burst while tracking the tigress. This hunt has several precise dates, as another extraordinary event (see the interesting case of ball lightning, mentioned later in this book) was recorded by Corbett in a great detail for the local newspaper immediately after the hunt. So, although the exact kill date is not mentioned in the story, it is not difficult to deduce it (April 12, 1929). Most likely, Corbett went after the man-eater in such a vulnerable state because he believed he was going to die from the abscess in his brain and was trying to rid the world of the man-eater during the few remaining days of his life (see Jordania, chapter "Why did Corbett Go After Talla Des Man-Eater in a Terrible Physical Condition?" 2020b:158-164).

The story of the hunt for his sixth man-eater contains another rare exact date, April 11, 1930. After a long and exhaustive hunt for the Chowgarh man-eater, Corbett found himself close to the tigress in a very uncomfortable position at the final showdown when he was saved by the human freeze reflex. We will discuss this extraordinary event in the section dedicated to the human freeze instinct in critical situations.

After the Chowgarh man-eater, hunts for four other man-eating tigers occurred and only one of them has a precise date, in its story. In the story for the Mohan man-eating tiger no mention was made of a year. Only the month of May was stated. Research later showed that this tiger was shot in May 1931.

Again, for the Kanda man-eating tiger, Corbett's eighth man-eater, no date is mentioned in the story. But now we know, from Corbett's telegram to his sister, that it was killed on July 19, 1932.

The Chuka man-eating tiger story mentions only the year 1937, and even this is incorrect. From Corbett's letter written from the village Chuka the day after the successful hunt we know the correct date was April 19, 1938 (not 1937). So, the Chuka man-eater shares his death date with those of Charles Darwin and Jim Corbett himself.

And for Corbett's last hunt, his tenth man-eater, the dreaded Thak man-eating tigress, its story was arguably the best documented hunt, with many precise dates, including the date which the tigress was killed, November 30, 1938.

I do not want to give the impression that Corbett's memory was not a reliable source for his stories. In many cases, I, along with the members of the Jim Corbett International Research group, were often amazed by the countless exact details provided in the stories and confirmed by the on-field reality during our trips in Kumaon. Corbett provided many crystal-clear details and observations that fill his stories and make reading his books a thrilling experience. But some shortcomings of his memory, particularly on dates, is obvious.

I want to mention also some other cases, when Corbett provided conflicting details in some of his stories, most likely a result of gradual memory loss.

It seems highly probable that Corbett never kept a formal diary, but he had the habit of writing to his sister Maggie (and sometimes

to his closest friend Ibbotson) long letters about his hunts for the man-eaters – and in one case, he had given the particulars of a hunt to a reporting journalist. The letters were written, sometimes during his hunts but sometimes the next few days, or only just few hours after the conclusion of the hunts. His stories, in his books, were written many years and sometimes many decades later. Interestingly, when writing the stories, it appeared that Corbett never referred to his letters, including those to Maggie, which were readily available. So, in some cases, we have interesting documents, two versions of the same dramatic events, written by a person with an unusually good memory immediately after the event and then written again years or decades later.

There are interesting differences between these two sources. Some can be easily explained by Corbett's downplaying the dangers he faced during the hunts to his sister. This is a natural desire for most when asked by a loving family member about a potentially mortal danger we experienced.

There are other types of differences as well, where memory corruption is more possible. For example, in the Chowgarh man-eater story, the number of men who accompanied Corbett during the last part of the hunt is different in the letter written very soon after the event (on the same day, April 11, 1930) from that in the story written years later. In the final part of the, according to Corbett's letter to Maggie, written hours after the hunt, he had three men with him, but according to the story published some five years later[24], the number of men was only two.

[24] The Chowgarh man-eater was first published privately in Corbett's first little book entitled *Jungle Stories* (1935) for which only a hundred copies were printed and distributed freely among his friends. However, the story was also later included in his best-seller *Man-Eaters of Kumaon* which had a wider worldwide audience.

Similarly, in the letter to Ibbotson, written two days after killing the Thak tigress (dated December 2, 1938, with the kill date November 30, 1938), Corbett mentions that five villagers accompanied him during the final showdown, whereas he mentions only four villagers in the story published about 6 years later. I naturally concluded that the earliest memory is to be trusted more than the later recollection. This has since been confirmed by Elizabeth Loftus, American cognitive psychologist and expert on the reliability of human memory, in a private letter which she wrote to me. So, even a great memory like Jim Corbett had, has its limits.

Despite his scholarly vigour and more academic-style work ethics, with many separate diaries for various topics of his interest, all with detailed entries, Charles Darwin's records sometimes also lacked crucially important details. Probably the best-known blunder Charles made was in his observations of the Galapagos finches. Darwin brilliantly connected the size and the shape of the finch's beak to the available food on different islands, proposing that the environment made these morphological changes from an originally single species (the idea that Fitzroy, staunch believer in the existence of unchangeable species, thought was a mistake). But in the research process Darwin found to his horror that he had not recorded precisely which finches were collected from which island. This information was crucial for his argument. Fortunately for him, specimens of various finches were also collected by other members of the *Beagle* crew, including Captain Fitzroy, who himself was a brilliant scientist, the pioneer (together with Sir Francois Beaufort) of contemporary weather forecasting. Fitzroy had exact records of where the finch specimens were obtained, allowing Charles to connect the finches with various sized beaks to specific islands and further his argument (Sulloway, 1982:14-19).

Apart from irregular and imperfect records of their experiences, both Darwin and Corbett shared a passion for free speculations and belief in the strength of their own reasoning. The freedom and openness for speculations, to my opinion, came from the fact that Darwin and even more so Corbett never had rigorous academic training during their schooling, both being self-educated naturalists. According to my experience in academia, thorough academic training often leads to considerable distrust and restraint for free speculations. As a matter of fact, the absence of speculations is seen by many professional scholars as a sign of maturity, the signature of a "serious scholar". Darwin was an advocate for the need of speculations: "I am a firm believer, that without speculation there is no good and original observation" (letter to A. R. Wallace, 22 Dec 1857). Clearly in defence of speculations and generalisations, Darwin also wrote:

> "False facts are highly injurious to the progress of science, for they often long endure; but false views, if supported by some evidence, do little harm, as everyone takes a salutary pleasure in proving their falseness; and when this is done, one path towards error is closed and the road to truth is often at the same time opened," (1871, Vol. 2, 385).

Notably, as much as Charles loved speculations, he readily let go of unfounded ideas when disconfirming facts came to his attention: "I have steadily endeavoured to keep my mind free so as to give up any hypothesis, however much beloved (and I cannot resist forming one on every subject) as soon as the facts are shown to be opposed to it." (Darwin's Life and Letters, 1887:103-104). Good advice for every scholar.

BRUSHING WITH ROYALTY

Jim Corbett and particularly Charles Darwin are among the British, England is proud of. This national honour can be translated into various tangible and intangible acknowledgements from various parties. Probably one of the most tangible honours of official appreciation by the British Empire is a knighthood. Well, here we need to concede that neither Darwin nor Corbett were knighted for their services to the British Empire.

This was particularly painful for Darwin, who had been a household name in Great Britain for decades before he died in 1882. True, he had powerful friends and supporters, and we know that in 1859 Lord Palmerston proposed to Queen Victoria that Charles Darwin should be knighted. The proposal was rejected after Bishop Wilberforce intervened to prevent the knighting of someone whose ideas contradicted the religious beliefs of the time. Furthermore, although virtually Darwin's whole adult life occurred during Queen Victoria's reign, the two never met nor communicated by any other means. Neither Prime Minister William Ewart Gladstone nor Queen Victoria attended Darwin's funeral on April 26, 1882, although the honour to be buried at Westminster Abbey was granted.

Jim Corbett, born in India of Domiciled British parents, had far less chances of being royally noticed. But strangely enough, he did meet members of the royal family. There were several reasons for this privilege. First, his bestselling book, *Man-Eaters of Kumaon*, which swept the world after World War II incited deep interest in the young animal-loving princess Elizabeth, soon to be head of the British royal family. According to Corbett, Princess Elizabeth read the book "from cover to cover" and was also interested in his second book about the man-eating leopard of Rudraprayag. Second, in 1952 Princess Elizabeth toured the British Empire, and

Kenya was the first country she visited. There she was interested to watch African wildlife, and the superb possibility to do so from an elevated platform at the Tree Tops Hotel in Nyeri[25] was brought to her attention and at that time, Corbett was the resident hunter of the hotel. That's how Jim Corbett, son of Nainital post-master received this gift from fate. Even more fantastically, Corbett spent more than the very short period of time most lucky mortals are afforded to meet the princess, or the Queen. He spent 20 hours with her, discussing various interesting topics and viewing the majestic African wildlife. During this 20-hour meeting, while the young Elizabeth was asleep in Tree Tops Hotel under his guard, her dear father George VI passed away at the age of 56, and the Princess became Queen. Therefore, the reign of Elizabeth the Second, started the day Jim Corbett was guarding her sleep after viewing African wildlife.

No question that, although Corbett had many adventures, meeting the Princess (and future Queen) was probably the most exciting, and certainly memorable. Corbett wrote his last book, *Tree-top*s about this meeting and historical day for the British monarchy. Without retelling the book, here is the rough timeline of how this event played out in in the intersection of two faraway places – London and Nyeri—that day.

There is a two hour-time-zone difference between Kenya and London. In the evening of February 5, Princess Elizabeth and her travelling party went to sleep in the Tree Tops hotel, after an exciting day watching and filming African animals, with Jim Corbett commenting on the wildlife scenes. That same day, in London, King George VI, after a day spent shooting with his friend Lord Fermoy and playing with his grandchildren, retired to his residence at San-

[25] A chapter is dedicated to this hotel in the book *Behind Jim Corbett's Stories* (Logos 2020), referred to in the bibliography.

dringham House, where he was born in 1895. During the early hours of his sleep the King suffered a thrombosis and died peacefully without awakening. The world, let alone the King's faithful servants, did not know about this tragic event until the next morning. That night, characteristically for Jim Corbett, he spent the whole of it at the staircase, guarding the princess's sleep. Throughout the night there was only one timid attempt to disturb the sleep of the royal party, and Corbett with his deep understanding of animals and their habits, knew that it was an old leopard he had known for many years.

Next morning the Princess woke up earlier than usual, unaware of the tragedy and the huge change brought by the night, to have more time watching and filming animals at the salt pond with Corbett by her side. The morning was graced by a fight between two rhinos.

By 7.30 in London, 9.30 in Kenya, the tragic news was made known to King's family and servants. Dr. James Ansell, "Surgeon Apothecary," was called to the royal household at Sandringham, and he declared the King dead.

By 9.00 Prime Minister Winston Churchill was notified, and a Cabinet meeting was called. At 10.45 the news was announced publicly. At 11.15 GMT the BBC's John Snagge was selected to announce the news to radio listeners around the world. By this time, it was 1.15 in the afternoon in Kenya, and Elizabeth still unaware of the biggest change of her life.

At approximately 2 pm in Kenya, 12.00 in London, during an emotional walk in the grounds of Sagana Lodge with her husband, Prince Phillip broke the news to the Queen. Finally, the news reached the person whose life was the most affected by this sudden tragedy. H.M. Queen Elizabeth II returned to her desk to compose

telegrams, cancelling the remaining engagements of her Commonwealth tour and came back to London.

In Nyeri, after hearing the news, Jim Corbett went back to the Tree Tops Hotel and made a historic entry in the guestbook: "For the first time in the history of the world, a young girl climbed into a tree one day a Princess, and after having what she described as her most thrilling experience, she climbed down from the tree the next day a Queen — God bless her."

We recently learned from the archive library of the OUP how Corbett reacted to this news because he wrote to his friend, OUP publisher Cumberlege a letter on February 10th, three days after the memorable meeting (published first in Behind Jim Corbett's Stories, vol 2. pages 232-233):

> "My dear Cumberlege,
>
> "You will have seen from the press, and heard over the wireless, that the Princess, now the Queen has been to Nyeri on a short visit. One of the three nights she was here she spent at Tree Tops, a little wooden hut in the branches of a tree in the heart of the forest. I, your humble friend, was honoured by being asked to stay with her and her husband for the twenty hours they spent in the tree. When I helped her into the tree she was a Princess, and when I helped her down she was a Queen.
>
> "In the whole of Africa I do not think there were two happier people than the Princess and the Duke that night. And during all the years that the Tree Tops has been in existence there has never been a better time for viewing game, than there was that night. We climbed into the tree at 2:30pm and at 4:30 when the Princess was told that tea was ready in the room behind her, she said, "Oh please may I have it here", she was on the balcony, "I don't want to miss a min-

ute of this." During those two hours she had been watching, and photographing with a cine camera, a herd of 47 elephants, some of which were under the balcony and nearly within reach of a fishing rod. Shortly afterwards there was a fight between two bull waterbucks which ended in the vanquished one dying the pool in front of us red with its blood. Later there was a fight between two rhinos.

"Now, all the above is for your private eyes only, and is a prelude to a request. The Princess has read Man-Eaters [of Kumaon] and knows the book from cover to cover. When she left Nyeri on the evening of the day we came down from Tree Tops, to fly home, she is said to have taken the leopard book [The Man-Eating Leopard of Rudraprayag] with her. She told me she was looking forward to reading it. My request is, that you have one copy each of our three books, Man-Eaters of Kumaon, The Man-Eating Leopard of Rudraprayag and My India, specially bound for the Queen. Also one copy of our illustrated Man-Eaters of Kumaon for boys specially bound for Prince Charles. I would suggest all four books being bound in soft green leather, with the titles and the tiger's head stamped on them in gold. If you can do this for me, at my cost, and send the books to me when ready, I will sign them and beg Her Majesty to accept them…"

The letter is dated 10/02.1952.

In 2021, members of Jim Corbett International Research Group, sent a copy of the letter to the Queen, who was delighted to hear once again about the memorable day when she unexpectedly became the Queen.

Elizabeth II was well known for her love of animals, and her father was most likely the person who provided her with the genes

and ample example for the love of nature. Symbolically, both King George VI and Princess Elizabeth spent their last days, the former as King, and the latter as Princess, enjoying nature.

POWER OF MINUTE OBSERVATION – DARWIN

During our lifetime we all might experience exceptionally rare moments, events, or strange feelings that we cannot explain. Some of us forget about such moments very soon, others remember them for life, and some, probably naturally more analytically inclined, not only remember such events, but try to understand exactly what happened to them for years, sometimes throughout their whole lives.

Both heroes of our book were extremely analytical; therefore, they can provide us with good material for a discussion of this topic. In this section, we go further into Darwin's and Corbett's personalities by discussing exactly such rare events and the thoughts these events triggered in their inquisitive minds. We will see that their observations were often miles ahead of their times.

Let us start with Charles Darwin. Naturally, as Darwin's life and legacy has been studied much more thoroughly than Corbett's, many of his observations have already been described and assessed in his books or the books about him. In Corbett's case we have more events that have not been researched, so these cases, some revealed in first instance, can benefit more from our attention.

We know of at least two rare events that gave Charles food for thought and analytical observations. Let us recall and briefly discuss these events.

1. Expanding time in critical situations

Charles Darwin had a well-documented habit of thinking while walking (or to put it the other way round, walking while thinking). When I visited his house on 1st August 2016, I went through his

"thinking path" with a great thrill. This habit was not unique to Charles Darwin, as quite a few people like thinking while walking. And as some might agree, when you are thinking deeply while walking, you might inadvertently get into problems. The same happened to Charles at least once. These are his own words from his autobiography,

> "I have heard my father and elder sister say that I had, as a very young boy, a strong taste for long solitary walks; but what I thought about I know not. I often became quite absorbed, and once, whilst returning to school on the summit of the old fortifications round Shrewsbury, which had been converted into a public footpath with no parapet on one side, I walked off and fell to the ground, but the height was only seven or eight feet. Nevertheless the number of thoughts which passed through my mind during this very short, but sudden and wholly unexpected fall, was astonishing, and seem hardly compatible with what physiologists have, I believe, proved about each thought requiring quite an appreciable amount of time" (Autobiography, pg. 29).

At least some readers might have had a somewhat similar experience, when unexpectedly a life-threatening situation arises, and the normal flow of time is disrupted. Time in these situations "slows down", or, more precisely, *seems* to slow down, giving us crucially important time to find the decisions to save ourselves. I remember one such a clear moment from early autumn 1978 when I was walking on former Plekhanov Prospect (today David the Builder Prospect) in my native Georgia capital, Tbilisi, going towards my first official workplace with the popular Georgian children's ensemble "Saplings". The day was hot, the air did not move, and most of the windows on the street were open. Quite suddenly a strong gust of wind started squashing the open windows. There were

several loud cracks from above as unfixed window frames started banging violently. Hearing a loud cracking sound close above my head, I looked up and here it came – almost a complete window glass less than two metres above, flying straight down towards my head. That was the moment when time stopped in my thought. I still remember the moment and what came the next. I felt no panic, all was fine, I knew that there was a danger from this big piece of falling glass, but I felt absolutely no fear, urgency, or panic. The glass appeared dipping so slowly, it seemed it was virtually hanging in the air, so I had plenty of time to decide what to do. I remember I thought first I need to dash forward to avoid the falling glass, but then decided instead to stop and make a step backwards. All these thoughts came very slowly, as I said, with no sense of fear or urgency, as I was sure there was plenty of time to react. So, I stopped my walk and made a single step backwards (I remember I moved my left foot back and put it next to where my right foot was. And after that, amazingly, the glass seemed to go faster and crashed in front of my feet. Somebody screamed behind me.

There was a difference between the experiences that Darwin had when he fell to the ground and when I saw the glass flying towards my head – Charles obviously could not stop his fall, while I had time to avoid the deadly glass landing on my head. Therefore, the acceleration that my brain produced helped me avoid the possibly fatal contact whereas Charles was unable to do that. But still, it is also possible, that the acceleration Charles' brain produced also helped him land better prepared for the dangerous contact with ground and possibly avoid a serious injury.

At the time Charles unexpectedly fell, this phenomenon was not yet discussed by scholars, although no doubt it had been experienced by millions of humans throughout history. According to my informal enquiries with friends and students, one in every 2-3

people has experienced it at least once during their lifetimes. People like Charles, with open and inquisitive minds, are aware that something very interesting was happening in the critical moments of such life-threatening events, but it took time for this phenomenon to find its way into scholarly discourses.

The phenomenon that Charles noticed about two hundred years ago, when time perception changes in critical moments (it happens during road accidents, criminal assaults, natural disasters, etc.) was first described in the 1892 "Yearbook of the Swiss Alpine Club", ten years after Darwin's death, by Albert von St. Gallen Heim. This pioneering article was translated into English (see in: Noyes and Kletti, 1972:46-47; Arstila, 2012). The author, Albert von St. Gallen Heim interviewed several mountain climbers and wrote that nearly 95% of climbers who reported an accidental fall from a cliff experienced increased mental activity, rising to a 100-fold velocity or intensity. The relationships of events and their probable outcomes were viewed with objective clarity. No confusion or fear was experienced, and time became greatly expanded. The climbers acted with lightning speed in accord with accurate judgment of the situation. In 21st century it was found out that the sense of time expansion was greater with more stressful events and was also different in males and females. Time expansion was greater in females (Loftus et al., 2012). The interested reader is referred to a book dedicated to this phenomenon, by Steve Taylor *Making Time: Why Time Seems to Pass at Different Speeds and How to Control It* (Taylor, 2005).

As we can see, Charles Darwin, as a person with an inquisitive and analytical brain, noticed and started thinking of the phenomenon of expanding time in life-threatening moments. And as we can see clearly now, this phenomenon was a crucial evolutionary

tool to promote survival, the essence of natural selection, so close to the heart of Charles Darwin.

Interestingly, none of the scholarly publications cited above mentioned the fact that Charles Darwin had such an experience, that subjective time was greatly extended in a life-threatening situation.

2. Geology of earthquakes

Another rare experience that Charles had is much better known and has been discussed in the scholarly literature. On February 20, 1835, 26-year-old Charles experienced a devastating earthquake that wrecked Chile. He wrote:

> "I was on shore & lying down in the wood to rest myself. It came on suddenly & lasted two minutes (but appeared much longer). The rocking was most sensible; the undulation appeared both to me & my servant to travel from due East. There was no difficulty in standing upright; but the motion made me giddy. I can compare it to skating on very thin ice or to the motion of a ship in a little cross ripple. ... An earthquake like this at once destroys the oldest associations; the world, the very emblem of all that is solid, moves beneath our feet like a crust over a fluid; one second of time conveys to the mind a strange idea of insecurity, which hours of reflection would never create" (McPhee, John, Darwin and the Chilean Earthquake. *The New Yorker* March 2, 2010).

It is easy to notice that Darwin registered (again!) the phenomenon of time expansion in a critical situation, as a two-minute tremor seemed much longer to him, although, compared to the sudden fall into the abyss, the earthquake probably felt less threatening.

Charles was brilliant to register many changes that the earthquake brought as a result. This was not only what everyone could

easily see (like the widespread destruction of city buildings), but most importantly, the sudden rise of the coastline by almost three metres. This was clear from the living marine shell creatures suddenly appearing almost three metres higher than sea level. Even more, after gaining this unique insight of what happened that day, Charles went further and was able to find the traces of marine shells much higher in the mountains, correctly deducing that endless similar earthquakes in the past were the force that raised the level of the ground, and in a larger scale, that created the Andean mountains. Even a greater picture was revealed when Charles connected the violent earthquake with the recent volcanic activity of three nearby mountains. And finally, his idea that "this large portion of the earth's crust floats in a like manner on a sea of molten rock" and that this was likely true of "the entire globe" was miles ahead of the common knowledge of his times[26]. So, Darwin's witnessing the 1835 Chilean earthquake was a brilliant example of a scholar experiencing first-hand a rare lifetime event and being able to make an important macro-deduction about the history of the planet after witnessing the two-minute experience.

Let us now switch to Jim Corbett's rich life experiences, when a rare event propelled him to make interesting observations, leading to potentially important scholarly conclusions.

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[26] The theory of continental drift was formulated much later in the early 20th century by Alfred Wegener. In his theory, Wegener suggested that all continents were once a single land mass and they slowly drifted apart, floating over a sea of magma (or molten rocks) to form the present-day pattern on the globe. Like Darwin's theory of evolution, continental drift was received with much criticism and scepticism, mainly because it occurs very slowly (like evolution of species) and is barely noticeable during a human lifetime. However, Wegener was later proven right in the 1960's much later after his death by the discovery of plate tectonics.

POWER OF MINUTE OBSERVATION – CORBETT

1. Mechanisms of freezing in humans

In a final part of the story "Robin", dedicated to his beloved hunting companion spaniel from his book *Man-Eaters of Kumaon*, Jim Corbett tells a dynamic story of the final confrontation with a wounded male leopard. The last all-out attack of the leopard and the intense scene are followed by an observation of the behaviour of a dog and a human in a sudden emergency.

> "Our reactions to the sudden and quite unexpected danger that had confronted us were typical of how a canine and a human being act in an emergency, when the danger that threatens is heard, and not seen. In Robin's case it had impelled him to seek safety in silent and rapid retreat; whereas in my case it had the effect of gluing my feet to the ground and making retreat rapid or otherwise impossible" (Corbett, Man-eaters of Kumaon, chapter "Robin", 1944:40).

The phenomenon Corbett describes, I believe, is still insufficiently explored in scholarly literature; therefore, I want to discuss it in a bit more detail. It is freezing in a critical moment. Humans often freeze when unexpectedly confronted by a big and lethal predator like a tiger or lion. Why we do such a thing which appears to be silly? Where does this strange reaction to a critical situation come from?

Let us face it - the first and the most natural thought for most people would be to run away as fast as you can. This advice would seem to many, as they sometimes say, "self-evident". But be careful; many of our ideas that were believed to be self-evident turn out to be false. So, let us ask, is it a good idea to run when you see a dangerous predator?

Ask any ethologist, or read any brochure written for tourists in the event of an accidental encounter with dangerous animals, and you will get equivocal advice: do not run away! Stay where you are! Fortunately, for most of us[27], our instincts formed during millions of the years of interaction with lethal predators give our body the same advice, the strict order not to move. This was the instinctive freezing that Corbett described. In the tense moment of close encounter, the deep-rooted instinct somewhere in our ancient "reptilian brain" overtakes our conscious brain activity and pushes us towards the only correct reaction – freezing. So, the freezing instinct that overtakes most humans when they find themselves in proximity of a lion or a tiger, is in fact a life-saving behaviour!

We all might have had terrorising nightmares in which we are approached by a monster that is going to attack and devour us, and we suddenly feel that our feet are paralysed from fear and glued to the ground, making it impossible for us to run away, as if every muscle in our body is petrified. Even Corbett evoked that terrifying prospect at the beginning of the chapter *The Mohan man-eater* in his book *Man-eaters of Kumaon*. In his narrative, Corbett mentions a girl who attempts to save an unfortunate companion who had fallen into a depression at the edge of a ravine when the latter had rushed after hearing a horrifying tiger growl. The girl engages a very narrow ledge to help her companion when, from behind, the tiger emerges on the ledge. The girl is found between the prospect of crashing down several hundred feet down the ravine and death inflicted by the tooth and claw of a tiger. This is where

[27] There is still a small proportion of humans that would flee at the sight of a lethal predator. This deviation in character has survived in smaller ratio instead of being phased out by natural selection as humans have evolved in social groups and can afford shelter or group protection.

Corbett ponders whether the girl, at that instant, would, like any of us, have dearly wished that it was a terrible nightmare in which a monstruous beast is attacking us but every muscle in our limbs are paralysed and only sudden waking up frees us, and we enjoy this cessation from the greatest of fear.

This is the work of our instincts formed during millions of years by our evolutionary experiences. Yes, for most animals, it might seem that the best option in that situation is to run away, but a much wiser adviser, coming from our evolutionary wisdom, whispers in our ear: "Do not run!" and we instinctively follow this advice, as we know from cumulative experience that in most similar cases this advice has been good for our survival.

Quite amazingly, this life-saving potential of freezing response is still unacknowledged and not properly researched by most of the scientific community. Let us quickly have a look at what popular and easily available sources (like various articles on Wikipedia) say about the evolutionary function of freezing: "Some animals stand perfectly still so that predators will not see them. Many animals freeze or play dead when touched in the hope that the predator will lose interest" (Wikipedia, *Fight-or-flight response* accessed on July 20th, 2021).

> "Freezing behavior or the freeze response is a reaction to specific stimuli, most commonly observed in prey animals. When a prey animal has been caught and completely overcome by the predator, it may respond by "freezing up" or in other words by staying completely still" (Wikipedia, *Freezing Behavior* accessed on July 20th, 2021).

As we can see, these two different types of freezing – one can be called "cryptic freeing", aimed to stay unnoticed by a predator ("animals stand perfectly still so that predators will not see them"), and the another catatonic freezing (or tonic immobility, or

we could call it “passive freezing” – “animals freeze or play dead when touched in the hope that the predator will lose interest”).

Humans also often react to imminent catastrophic danger by freezing, which is usually seen as a serious disorder. Have a look: “Of the various action disorders, cognitive paralysis leading to “freezing” behaviour or catatonia in the face of danger is the most serious, as it prevents any survival response during the impact phase of the incident … Common speech describes such behaviour in terms such as “struck dumb,” “petrified,” and “frozen stiff” (Leach, 2016).

But what Corbett mentions is a very different type of freezing, neither cryptic freezing, nor catatonic (passive) freezing. This is a third version of freezing that I would call “aggressive freezing”, with a very different message to the predator. If passive freezing sends the message to the predator “I am yours, I am not running away, and I am not fighting back, so there is no need for violence”, this new kind of freezing, “aggressive freezing”, sends a very different message: “I am not running away because I am not afraid of you. I am warning you that if you come closer, I will fight you, and you will regret your decision to attack”.

This is a totally different behavioural model. Here we have a freezing response, not as signal of total submission, but as a warning signal. I would suggest using the term “aposematic freezing” for this kind of aggressive freezing. Such freezing is an important part of the defence strategies of aposematic animals (skunks, hedgehogs, porcupines, venomous snakes), who famously do not run away at the approach of predators. But first, to correctly understand the discussion, let us clarify these strange terms “aposematic defence strategy” and “aposematic animal.”

Among several defence strategies in the animal kingdom there are two important ones that can be considered as the most con-

trasting to each other. The first one is **crypsis**, and the second one is **aposematism**. Let me briefly explain the differences between them (see Ruxton et al, 2004; Caro & Girling, 2005; Gursky & Nekaris 2007; Valli et al., 2005) .

The central strategy of cryptic defence is that animals try to stay unnoticed by all possible means. So cryptic animals stay low and try to hide, their bodies are coloured by camouflaging colours to be unnoticed; they do not have strong body odour for obvious reasons, and they try to be silent most of the time. All these elements of morphology and behaviour are for the same reason – to be unnoticed by a predator. And in case they are noticed by a predator, they instantly flee. As we can guess, cryptic species are very good at hiding and also at running. The common rabbit is a classic cryptic prey species.

The central strategy of aposematic defence is the total opposite from the cryptic defence. Aposematic animals, we can say, are braver than cryptic species, and they do not run from danger. They try to communicate by all possible means that they are not afraid of the predator and that if the predator attacks them, they will fight back, and the predator will regret it. To achieve this, aposematic animals use all the modalities (visual, audio, olfactory, behavioural), first, to intimidate the predator, and second, to communicate the warning message constantly. For this reason, they try to be as visible as possible, often have contrasting body colours; they try to look bigger; they often make constant sounds when moving around; and they often have constant body odour. Moreover, when confronted by a predator, aposematic animals do not try to run away; on the contrary, they stand their ground, and by the combination of their postures, sounds, and behaviours try to scare away the predator. So, when facing predators in close quarters, they often increase their body size by standing in bipedal

posture to seem taller or inflate their bodies; they try to make much louder, aggressive sounds, make aggressive movements, and emit stronger smell. The word "aposematism" comes from the Greek and can be translated as "giving a warning sign 'stay away'". Skunks and porcupines are among classic aposematic species.

Cryptic defence is much better known than aposematic defence among both scholars and lay people. Even some biologists are not aware of the term "aposematism." Many facets of aposematic defence are not researched properly. For example, the notion of "warning coloration" is much better known among scholars and lay people, although coloration is only one aspect of aposematic display. Other modes of aposematic display–audio, olfactory and behavioural–are often simply ignored. In reality, aposematic animals never use only one modality to send a warning message. Instead, they send this message by all modalities. For example, not many biologists pay attention to the fact that the classic aposematic animal, the skunk, apart from its contrastively coloured bushy tail, also makes sounds when walking, makes aggressive sounds when confronted by a predator; has a constant body odour (apart from the famous spray); when confronted, stands bipedal on its front feet to seem taller; and does not run away when meeting predators. Apart from these features, skunks and other aposematic species usually cannot run fast; instead, they walk awkwardly, as if giving a constant message to the predators that they do not need to run at all. So, skunks use not only body contrastive colours, but postures, sounds, smells, and behavioural signals as well. In short, let me repeat, that aposematic animals use all the possible modes simultaneously to send the warning signal as strongly as possible. So, freezing (not running away) is an important part of aposematic behavioural strategy.

I happen to have an intimate knowledge of aposematic strategy of defence, as I believe aposematic display is crucial for understanding the evolutionary function of the human passion for group choral singing – the sphere of my immediate expertise (Jordania, 2011, 2014, 2017, Brown & Jordania, 2011).

In my 2017 book *A New Model of Human Evolution: How Predators Shaped Human Morphology and Behaviour* (and the earlier edition of the book with a different title *Tigers, Lions and Humans: History of Rivalry, Conflict, Reverence and Love*, 2014) I proposed that human morphology and behaviour was formed by the forces of natural selection via the aposematic strategy of defence. Our highly visible bipedal posture, long legs and long tightly coiled hair on top of head that make us look taller and more intimidating; the use of colourful body painting; the ability to make very loud and coordinated group sounds; our hyperactive sweat glands, very effective for creating a strong body odour; our instinctive freeze response to an imminent life-threatening aggressive situation; our slow, awkward and ineffective running; and several other elements of our morphology and behaviour indicate that our ancestors used the aposematic defence strategy against predators.

Corbett's experience, together with the general human tendency of freezing when seeing major predators, suggest that we probably need to add another reason apart from cryptic and catatonic freezing – "aposematic freezing" (or "aggressive freezing"). Aposematic freezing takes place when a prey animal does not flee, even if overwhelmed by fear. In this situation a predator is pushed to think twice before attacking, as the prey's not running away might well be a sign of readiness to fight back. This behaviour is a trademark of aposematic animals. The freezing that Corbett mentions, and the one that stops the lions and tigers from attacking humans who do not run away, is aposematic in nature. Aposematic

freezing may be (and often are) accompanied by other involuntary physiological reactions – like raising hair on head and body, raising hands, or screaming (all potent aposematic behaviours, by the way).

As indicated in scholarly literature, "Despite the fundamental nature of tonic immobility in anxiety responses, surprisingly little empirical research has focused on the "freeze" response in humans" (Schmidt et al, 2008). So, we should not exclude that the human freeze reaction at critical moments is not a psychological disorder (as it is sometimes seen), but an evolutionary survival instinct, deeply instilled in the "reptilian brain" of our species by millions of the years of the fight for survival against African predators.

And I want to finish this section on the human freezing instinct in critical situation by relating Corbett's other similar experience, this time when he found himself less than three metres from a man-eating tiger with his hands badly prepared for rapid shooting. This is the famous final encounter with the so-called Chowgarh man-eater.

During 1929 and 1930, Corbett spent several months hunting the man-eating tigress that killed 64 people, sometimes assisted by her adult cub. After killing the cub in 1929, he was in pursuit of the man-eater, and during one attempt to sit over the bait, Corbett, who was with his three (or two, see below) men, accidentally found himself in very close proximity to the tigress. Read his own account below, as Corbett's writing style is very difficult to surpass. Here Corbett just tied the buffalo on a hillside and was going with his helpers to the side of an opposing hill to sit and wait for the tigress. On the way he accidentally saw a very rare and unusual pair of nightjar eggs, and picked them up for his collection. We need to remember, that even when hunting man-eaters, Corbett was still

primarily a naturalist. After picking up the eggs and placing them safely in his left hand, events went as follows:

> "As I went down the ravine the banks became higher, and sixty yards from where I had entered it I came on a deep drop of some twelve to fourteen feet. The water that rushes down all these hill ravines in the rains had worn the rock as smooth as glass, and as it was too steep to offer a foothold I handed the rifle to the men and, sitting on the edge, proceeded to slide down. My feet had hardly touched the sandy bottom when the two men, with a flying leap, landed one on either side of me, and thrusting the rifle into my hand asked in a very agitated manner if I had heard the tiger. As a matter of fact I had heard nothing, possibly due to the scraping of my clothes on the rocks, and when questioned, the men said that what they had heard was a deep-throated growl from somewhere close at hand, but exactly from which direction the sound had come, they were unable to say. Tigers do not betray their presence by growing when looking for their dinner and the only, and very unsatisfactory, explanation I can offer is that the tigress followed us after we left the open ground, and on seeing that we were going down the ravine had gone ahead and taken up a position where the ravine narrowed to half its width; and that when she was on the point of springing out on me, I had disappeared out of sight down the slide and she had involuntarily given vent to her disappointment with a low growl. Not a satisfactory reason, unless one assumes without any reason that she had selected me for her dinner, and therefore had no interest in the two men. Where the three of us now stood in a bunch we had the smooth steep rock behind us, to our right a wall of rock slightly leaning over the ravine and fifteen feet high,

and to our left a tumbled bank of big rocks thirty or forty feet high. The sandy bed of the ravine, on which we were standing, was roughly forty feet long and ten feet wide. At the lower end of this sandy bed a great pine tree had fallen across, damming the ravine, and the collection of the sand was due to this dam. The wall of overhanging rock came to an end twelve or fifteen feet from the fallen tree, and as I approached the end of the rock, my feet making no sound on the sand, I very fortunately noticed that the sandy bed continued round to the back of the rock.

"This rock about which I have said so much I can best describe as a giant school slate, two feet thick at its lower end, and standing up not quite perpendicularly on one of its long sides.

"As I stepped clear of the giant slate, I looked behind me over my right shoulder and looked straight into the tigress's face.

"I would like you to have a clear picture of the situation.

"The sandy bed behind the rock was quite flat. To the right of it was the smooth slate fifteen feet high and leaning slightly outwards, to the left of it was a scoured-out steep bank also some fifteen feet high overhung by a dense tangle of thorn bushes, while at the far end was a slide similar to, but a little higher than, the one I had glissaded down. The sandy bed, enclosed by these three natural walls, was about twenty feet long and half as wide, and lying on it, with her fore-paws stretched out and her hind legs well tucked under her, was the tigress. Her head, which was raised a few inches off her paws, was eight feet (measured later) from me, and on her face was a smile, similar to that one sees on the face of a dog welcoming his master home after a long absence.

"Two thoughts flashed through my mind, one, that it was up to me to make the first move, and the other, that the move would have to be made in such a manner as not to alarm the tigress or make her nervous.

"The rifle was in my right hand held diagonally across my chest, with the safety-catch off, and in order to get it to bear on the tigress the muzzle would have to be swung round three-quarters of a circle.

"The movement of swinging round the rifle, with one hand, was begun very slowly, and hardly perceptibly, and when a quarter of a circle had been made, the stock came in contact with my right side. It was now necessary to extend my arm, and as the stock cleared my side, the swing was very slowly continued. My arm was now at full stretch and the weight of the rifle was beginning to tell. Only a little further now for the muzzle to go, and the tigress who had not once taken her eyes off mine was still looking up at me, with the pleased expression still on her face.

"How long it took the rifle to make the three-quarter circle, I am not in a position to say. To me, looking into the tigress's eyes and unable therefore to follow the movement of the barrel, it appeared that my arm was paralysed, and that the swing would never be completed. However, the movement was completed at last, and as soon as the rifle was pointing at the tigress's body, I pressed the trigger.

"I heard the report, exaggerated in that restricted space, and felt the jar of the recoil, and but for these tangible proofs that the rifle had gone off, I might, for all the immediate result the shot produced, have been in the grip of one of those awful nightmares in which triggers are vainly pulled of rifles that refuse to be discharged at the critical moment.

> "For a perceptible fraction of time the tigress remained perfectly still, and then, very slowly, her head sank on to her outstretched paws, while at the same time a jet of blood issued from the bullet-hole. The bullet had injured her spine and shattered the upper portion of her heart" (Corbett, Man-Eaters of Kumaon, 1946, chapter "Chowgarh Tigers", pg. 91-92)

Corbett himself analysed this situation very interestingly:

> "Three things, each of which would appear to you to have been to my disadvantage, were actually in my favour. These were (a) the eggs in my left hand, (b) the light rifle I was carrying, and (c) the tiger being a man-eater. If I had not had the eggs in my hand I should have had both hands on the rifle, and when I looked back and saw the tiger at such close quarters I should instinctively have tried to swing round to face her, and the spring that was arrested by my lack of movement would inevitably have been launched. Again, if the rifle had not been a light one it would not have been possible for me to have moved it in the way it was imperative I should move it, and then discharge it at the full extent of my arm. And lastly, if the tiger had been just an ordinary tiger, and not a man-eater, it would, on finding itself cornered, have made for the opening and wiped me out of the way; and to be wiped out of the way by a tiger usually has fatal results."

I would suggest, that the initial freeze reaction that stopped the tigress from the attack (predators also prefer to attack when the prey has not seen the hunter) and gave Corbett time to think out a line of action was the same reaction that glued Corbett's feet to the ground in the case of the wounded leopard's attack.

2. Group singing as a defence strategy

Now I would like to discuss another important sphere of human defence systems from predators – singing, particularly group singing. Incidentally, this is the central domain of my professional expertise as an evolutionary musicologist (Jordania, 2011, 2014, 2017. See also Harrington, 1989).

Loud group singing, synchronised by common meter and rhythm, is a very effective tool of defence from predators. Group singing can strongly affect both the *opposition* (to scare off predators or competitors), as well as the *group of singers* itself (give them confidence, moral unity, disregard of fear and pain). There is no animal species that can withstand the massive "audio attack" from a noisy human group. All the strongest predator species, including lions and tigers, try to avoid confrontation with a group of loudly vocalising humans. One of the oldest means of hunting, beating, is primarily based on the effect of combined human voices and other noises on animals.

As a uniquely insightful naturalist, Corbett made an interesting observation through his rich experience. Jim Corbett was well-aware of the power of singing as a potent tool to avoid an attack from dangerous predators, including a hungry man-eating tiger. In the dramatic story of the Chowgarh man-eating tiger, when Corbett's men had to go several kilometres through dense bush while followed by a man-eater, Corbett advised them to sing:

> "My men, whom I had instructed to keep close together and sing from the time they left camp until they joined me on the forest road, were not due for an hour and a half, and during this time it was more than likely that the tigress would break cover and try to stalk, or rush, me." (Corbett, *Man-Eaters of Kumaon*, 1944, Chapter "Chowgarh Tigers," pg. 69).

So, Corbett ordered his unarmed men to sing continuously for an hour and a half to discourage man-eater from attacking them.

Apart from intimidating predators (and opposition), group singing has even more profound internal effect on the singers. Synchronous singing and associated rhythmic body movements (entrainment) can virtually put the individual members of the singing group into a state of trance (I call this state the "battle trance" Jordania, 2011, 2014, 2017; Wade, 2016. See also Rouget, 1985, and Pieslak, 2009). This is an altered state of consciousness in which participants feel as a single collective, with united collective identity. In that state common goals override the instinct of self-survival, so participants of the confrontation do not feel fear or even pain of horrible wounds. The military has been aware of this phenomenon for the last several centuries. Every general knows that the best tool to transform a new recruit into a soldier ready to follow orders and go into potentially lethal attack is to do long sessions of group rhythmic drill (read about this in book "Dance and drill in human history, by McNeil, 1995). It was even recently discovered that group singing leads to an amazing synchronisation of the singers' heartbeats (Vickhoff et al., 2013).

It is surprising that although our understanding of the power of music has been drastically increased in recent decades, scholars still fail to notice this incredible power of music in matters of defence, particularly as this power has been known to the military for centuries. It is possible that Corbett became aware of the power of group singing from his military experience in two world wars. So, evolutionary musicologists trying to uncover the evolutionary function human music can learn about the importance of music in matters of defence from a wise naturalist, Jim Corbett.

3. Extrasensory perception, or jungle sensitivity

Jim Corbett's amazing life, full of adventures related in his stories, provided great first-hand material for such a hot topic as extrasensory perception (also known as the sixth sense). When tracking man-eating tigers, Corbett on several occasions was warned by a feeling of imminent danger. He named it "jungle sensitivity" and tried to explain this phenomenon at best as he could (Corbett, 1953, Chapter 12). Corbett is very clear and detailed in describing such moments in his stories. Here are some of them.

On May 11, 1907, for many hours Corbett followed the Champawat man-eater tigress who had just killed her last human victim, a young woman close to Champawat. The tigress was so hungry that while she was carrying the body of the victim, with Corbett at her heels, she was trying to eat the body from time to time. After several hours of hair-rising slow pursuit in the dangerous dense bush of mountainous terrain Corbett saw something that stayed in his memory for life:

> "Splinters of bone were scattered round the deep pug marks into which discoloured water was slowly seeping and at the edge of the pool was an object which had puzzled me as I came down the watercourse, and which I now found was part of a human leg. In all the subsequent years I have hunted man-eaters I have not seen anything as pitiful as that young comely leg bitten off a little below the knee as clean as though severed by the stroke of an axe out of which the warm blood was trickling.
>
> "While looking at the leg I had forgotten all about the tigress until I suddenly felt that I was in great danger. Hurriedly grounding the butt of the rifle, I put two fingers on the triggers, raising my head as I did so, and saw a little earth from the fifteen-foot bank in front of me, come rolling

down the steep side and plop into the pool. I was new to this game of man-eater hunting or I should not have exposed myself to an attack in the way I had done. My prompt action in pointing the rifle upwards had possibly saved my life, and in stopping her spring, or in turning to get away, the tigress had dislodged the earth from the top of the bank.

"The bank was too steep for scrambling, and the only way of getting up was to take it at a run. Going up the watercourse a short distance I sprinted down, took the pool in my stride, and got far enough up the other side to grasp a bush and pull myself on to the bank. A bed of Strobilanthes, the bent stalks of which were slowly regaining their upright position, showed where, and how recently, the tigress had passed, and a little further on under an overhanging rock I found where she had left her kill when she came to have a look at me" (Corbett, *Man-Eaters of Kumaon*, 1944, chapter "Champawat Man-Eater" pg. 18)

This sudden sense of danger saved Corbett's life. Here is a similar event, this time from 1931, while hunting the Mohan man-eater:

"On the fourth evening when I was returning at sunset after visiting the buffalo on the ridge, as I came round a bend in the road thirty yards from the overhanging rock, I suddenly, and for the first time since my arrival at Kartkanoula, felt I was in danger, and that the danger that threatened me was on the rock in front of me. For five minutes I stood perfectly still with my eyes fixed on the upper edge of the rock, watching for movement. At that short range the flicker of an eyelid would have caught my eyes, but there was not even this small movement; and after going forward ten paces, I again stood watching for several minutes. The fact that I had seen no movement did not in any way reassure

me the man-eater was on the rock, of that I was sure; and the question was, what was I going to do about it? The hill, as I have already told you, was very steep, had great rocks jutting out of it, and was overgrown with long grass and tree and scrub jungle. Bad as the going was, had it been earlier in the day I would have gone back and worked round and above the tiger to try to get a shot at him, but with only half an hour of daylight left, and the best part of a mile still to go, it would have been madness to have left the road. So, slipping up the safety-catch and putting the rifle to my shoulder, I started to pass the rock.

"The road here was about eight feet wide and going to the extreme outer edge I started walking crab-fashion, feeling each step with my feet before putting my weight down to keep from stepping off into space. Progress was slow and difficult, but as I drew level with the overhanging rock and then began to pass it, hope rose high that the tiger would remain where he was until I reached that part of the road from which the flat bit of ground above the rock, on which he was lying, was visible. The tiger, however, having failed to catch me off my guard was taking no chances, and I had just got clear of the rock when I heard a low muttered growl above me, and a little later first a *kakar* went off barking to the right, and then two hind *samburs* started belling near the crest of the triangular hill.

"The tiger had got away with a sound skin, but for the matter of that, so had I, so there was no occasion for regrets…" (Corbett, *Man-Eaters of Kumaon*, 1944, chapter "Mohan Man-Eater" pg. 127)

Such tense and vivid scenes can be found in a few other Corbett stories as well. Very interestingly, these cases involve only

man-eating tigers, never leopards, although Corbett hunted two very dangerous man-eating leopards, the Panar man-eater in 1909 and 1910 and the Rudraprayag man-eater in 1925 and 1926, and during these hunts he would have tremendously benefitted had he experienced the similar feeling of approaching leopards. In fact, this strange warning feeling would have been even more useful with leopards, as Corbett was often hunting them in pitch darkness at night, usually without the aid of any tools for light.

Wayne Welch, a member of Jim Corbett International Research Group FB site, established in 2018, expressed in 2021 a potentially ground-breaking idea to explain Corbett's jungle sensitivity: after witnessing the catastrophic Nainital landslide in 1880, 5-year-old Jim gradually developed PTSD with associated hypersensitivity. Corbett dedicated a chapter to the mysterious feeling he called jungle sensitivity in his book *Jungle Lore*. Welch, following Corbett's idea, proposed that the feeling must have been established during the thousands and possibly millions of years of our evolutionary past as a vitally important tool for avoiding predators. The idea seems to have great potential to explain Corbett's experiences. So, there is a possibility that normal human senses, heightened in a hypersensitive, perceive information that our conscious mind (and our senses) are not able to receive.

Corbett's accounts of his extraordinary sensitivity are to date a neglected treasure trove for the experts who work on his very sensitive topic, both the so-called "believers" and "sceptics". I hope future scholars of the limits of human senses will make use of this unique material from the private experience of a world-class naturalist.

4. Ball lightning

Another interesting event immortalized in Corbett books is witnessing a strange atmospheric phenomenon on April 5, 1929 near the Purnagiri Temple. Corbett was in search of the Talla Des man-eating tigress when he and his men witnessed a number of unexplained round lights floating high on mountain slopes or in the air. Bewildered Corbett described in detail what he and his men saw while they were camped on the Indian side of the Sarda River. He also attempted to explain the phenomenon:

"The day had been hot and we had covered some sixteen miles since detraining at Tanakpur. I was comfortably tired and was enjoying an after-dinner cigarette, when on the hill on the far side of the river I suddenly saw three lights appear. The forests in Nepal are burnt annually, the burning starting in April. Now, on seeing the lights I concluded that the wind blowing down the gorge had fanned to flame the smouldering embers in some dead wood. As I idly watched these fires two more appeared a little above them. Presently the left-hand one of these two new fires moved slowly down the hill and merged into the central one of the original three. I now realized that what I had assumed were fires, were not fires but lights, all of a uniform size of about two feet in diameter, burning steadily without a flicker or trace of smoke. When presently more lights appeared, some to the left and others farther up the hill, an explanation to account for them presented itself. A potentate [a very important man, autocrat] out on shikar had evidently lost some article he valued and had sent men armed with lanterns to search for it. Admittedly a strange explanation, but many strange things happen on the far side of that snow-fed river.

"My men were as interested in the lights as I was, and as the river below us flowed without a ripple and the night was still, I asked them if they could hear voices or any other sounds – the

distance across was about a hundred and fifty yards – but they said they could hear nothing. Speculation as to what was happening on the opposite hill was profitless, and as we were tired out after our strenuous day the camp was soon wrapped in slumber. Once during the night a ghooral sneezed in alarm on the cliff above us, and a little later a leopard called." (Corbett, *Temple Tiger and More Man-Eaters of Kumaon*, OUP, 1954, Chapter "Talla Des Man-Eater" pg. 151-152).

Corbett wrote a detailed description of the event in a local newspaper and Rawal (High Priest) of Purnagiri visited him, excited and sure that Corbett's words confirmed the view that such lights had, as they already believed, a divine nature.

Let us first check the list of features Corbett used to characterize the lights:

(1) The lights did not appear simultaneously,

(2) They were of a uniform size (about two feet in diameter),

(3) They were not affected by wind,

(4) They were able to move from one spot to another,

We can also add a few points we can clearly deduce from the text:

(5) The lights were first seen on a mountainside;

(6) The lights stayed above Corbett and his men all the time;

(7) The lights were able to merge with each other,

(8) They were burning without any flicker or trace of smoke,

(9) Corbett does no mention the maximum number of the lights but there were at least eight of them.

(10) Corbett does not mention how long they were watching the lights, but we know they decided to sleep quite soon, while the lights were still there, so the lights were there more than a few minutes, possibly even for a half an hour or more.

From searching the available information on various natural phenomena, I came to the conclusion that Corbett and his men most likely witnessed a still unexplained natural phenomenon known as "ball lightning" (Jordania, 2020a). Ball lightning was not a subject of scholarly study until the 1960s, so for Corbett this was a totally mysterious experience. Today there are plenty of scholarly publications on this phenomenon, and although it has been seen many times, there is no accepted explanation of the phenomenon. Apart from scholarly articles, the National Aeronautics and Space Administration (NASA, USA Governmental body. See: Rayle, 1966) was studying the phenomenon for the possibility of its military use. We can summarise the various scholarly articles on ball lightning by the following points:

(1) The term "ball lightning" refers to reports of luminous, spherical objects that vary from pea-sized to several meters in diameter; the most usual size is over 12 inches in diameter;

(2) Ball lightning is an unexplained and potentially dangerous atmospheric electrical phenomenon;

(3) Some early reports claim that the ball eventually explodes, sometimes with fatal consequences, although in most reports they caused no disturbances whatsoever;

(4) After disappearing, they usually leave behind the odour of sulphur;

(5) Though usually associated with thunderstorms, the phenomenon lasts considerably longer than the split-second flash of a lightning bolt, and can occur in perfectly still weather and can last for dozens of minutes;

(6) Until the 1960s, most scientists treated reports of ball lightning sceptically, despite the fact that numerous accounts were available from around the world from early centuries;

(7) Laboratory experiments can produce effects that are visually similar to reports of ball lightning, although it is not known how they relate to the natural phenomenon;

(8) The first-ever optical spectrum of what appears to have been a ball-lightning event was published in January 2014, and included a video at high frame-rate;

(9) Scientists have proposed many hypotheses about ball lightning over the centuries. Scientific data on natural ball-lightning remain scarce, owing to its infrequency and unpredictability.

(10) Owing to inconsistencies and the lack of reliable data, the true nature of the ball lightning remains unknown.

(11) Regarding the frequency of occurrence, according to a 1960 study, 5% of the population reported having witnessed ball lightning. A similar study analysed reports of 10,000 cases.

(12) Almost universally the cases of ball lightning are traditionally considered to be connected to supernatural forces.

There are a large number of famous cases of seeing ball lightning throughout history. For more information about cases of ball lightning, see the above-mentioned NASA article or a book dedicated to ball lightning (Singer, 1971). Understandably, more violent ones (destroying buildings and killing people and animals) attracted more attention.

All the existing scholarly reviews of this phenomenon note that descriptions of ball lightning vary widely. It has been described as moving up and down, sideways or in unpredictable trajectories, hovering and moving with or against the wind; attracted to, unaffected by, or repelled from buildings, people, cars and other objects. Some accounts describe it as moving through solid masses of wood or metal without effect, whereas others describe it as destructive and melting or burning those substances.

Its appearance has also been noted at altitudes of 1,000 feet (300 m) and higher, both during thunderstorms and perfectly calm weather. Ball lightning has been described mostly as a transparent, evenly lit, radiating round ball-like object; although it mostly appears as a single ball, instances of the appearance of several balls have been recorded; Ball lightning can last from a few seconds to more than a half-hour; its appearance and disappearance, as a rule, happens without any sound, although, as already mentioned, there have been cases of loud explosions;

According to concluding remarks of the NASA article (pg. 19-20):

• Among the 112 descriptions of well-recorded ball lightnings, two groups of 12 [occurrences] each were found which appeared to describe two different types of events, Group A and Group B:

• **Group A description:** the ball lightning observations generally followed a lightning strike to ground, and were reported to be seen in daytime. The balls were larger than 15 inches, and they came to within a foot of the ground;

• **Group B description:** the lightning ball originated without lightning strikes and without accompanying bad weather. The ball was first seen in midair, did not approach the ground, and remained in midair throughout its life. These ball/balls were larger than 15 inches, less bright, and they disappeared quietly.

It is obvious that the lights seen by Corbett and his men coincide closely with the description of ball lightning from Group B.

Other rare features are a large number of balls seen by Corbett and his men, and their unusually long existence, although the appearance and very long existence of several lightning balls has been also documented.

As we can see, Corbett provided a very interesting case of ball lightning that took place on a quiet evening of April 5, 1929, on

a Nepalese side of Sarda River, under the Purnagiri Temple. The event, described in great detail by a world-renowned naturalist of the highest standard, hopefully will attract attention of the researchers of this still mysterious natural phenomenon.

To complete this section, we can say that rare events bring humans to different emotions and different conclusions. As analytical thinkers, Darwin and Corbett were able to make thought-provoking, and sometimes amazingly far-looking suggestions, such as Darwin's noticing the slowing of subjective time in critical situations, or the effects of a major earthquake, or Corbett's noticing the freezing response and hypersensitivity in critical situations and the importance of singing to avoid a predator attack. Such rare events are given to humans, if they are lucky, once during a lifetime, and we should not be shy of proposing explanations and searching for answers by checking the available information on the subject. Both Darwin and Corbett give good examples of such creative and bold thinking, complemented with bold generalisations.

5. Sherlock Holmes of the jungles

Now I want to discuss Corbett's mastery of observation and deduction. Corbett stories are full of minute details when attending the scene of a jungle tragedy or a mystery of animal behaviour, expertly interpreted. All his deductions were made from virtually obscure, insignificant details, like a stem of a grass slowly rising or a small twig moved.

Not surprisingly, Jim Corbett was often compared to Sherlock Holmes, and was called the "Sherlock Holmes of the jungles" by many biographers. The first time this title was mentioned by Lord Malcolm Hailey, as was mentioned already in a special footnote in the Introduction of this book. As a dedicated fan of Arthur Conan-

Doyle's talent and the fictional character of the legendary detective, I can appreciate this comparison. I do not know about other fans of the Sherlock Holmes stories, but for me probably the most thrilling parts are the introductions of the stories, when Sherlock Holmes and Dr. Watson, in a free conversation about the new characters based on their appearance or a personal item (like a walking stick, or a watch), Holmes deduces many intimate details of the character, based on ostensibly neutral observations.

The character of Sherlock Holmes was modelled on Dr. Joseph Bell, a Scottish surgeon, one of the forerunners of the forensic science. During his lectures he had a habit of asking someone unknown to him to come forward, and by observing him, would talk about his profession and recent activities. Tellingly, one of Corbett's favourite activities was to observe strangers and deduce their profession and other activities.

Here is one of my favourite sections from Corbett books, where he shows a keen interest in fellow humans and a wonderful eye for detail that Sherlock Holmes would be proud of. Corbett describes his work at Mokameh Ghat:

> "My work was never dull, and time never hung heavy on my hands, for in addition to arranging for the crossing of the Ganges, and the handling at Mokameh Ghat of a million tons of goods, I was responsible for the running of the steamers that ferried several hundred thousand passengers annually between the two banks of the river. The crossing of the river, which after heavy rains in the Himalayas was four to five miles wide, was always a pleasure to me, not only because it gave me time to rest my legs and have a quiet smoke but also because it gave me an opportunity of indulging in one of my hobbies—the study of human beings. The ferry was a link between two great systems of railways, one radiating north

and the other radiating south, and among the seven hundred passengers who crossed at each trip were people from all parts of India, and from countries beyond her borders.

"One morning I was leaning over the upper deck of the steamer watching the third-class passengers taking their seats on the lower deck. With me was a young man from England who had recently joined the railway, and who had been sent to me to study the system of work at Mokameh Ghat. He had spent a fortnight with me and I was now accompanying him across the river to Samaria Ghat to see him off on his long railway journey to Gorakh-pur. Sitting cross-legged, or tailor wise, on a bench next to me and also looking down on the lower deck was an Indian. Crosthwaite, my young companion, was very enthusiastic about everything in the country in which he had come to serve, and as we watched the chattering crowds accommodating themselves on the open deck he remarked that he would dearly love to know who these people were, and why they were travelling from one part of India to another. The crowd, packed like sardines, had now settled down, so I said I would try to satisfy his curiosity. Let us start, I said, at the right and work round the deck, taking only the outer fringe of people who have their backs to the rail. The three men nearest to us are Brahmins, and the big copper vessels, sealed with wet clay, that they are so carefully guarding, contain Ganges water. The water on the right bank of the Ganges is considered to be more holy than the water on the left bank and these three Brahmins, servants of a well-known Maharaja, have filled the vessels on the right bank and are taking the water eighty miles by river and rail for the personal use of the Maharaja who, even when he is travelling, never uses any but Ganges water for

domestic purposes. The man next to the Brahmins is a Mohammedan, a dhoonia by profession. ["Dhoonia" is an Urdu word for someone who deals in the trade of cotton fibres for making pillows, mattresses and other non-garment uses of cotton fibres. Editor's comment.] He travels from station to station teasing the cotton in old and lumpy mattresses with the harp-like implement lying on the deck beside him. With this implement he teases old cotton until it resembles floss silk. Next to him are two Tibetan lamas who are returning from a pilgrimage to the sacred Buddhist shrine at Gaya, and who, even on this winter morning, are feeling hot, as you can see from the beads of sweat standing out on their foreheads. Next to the lamas are a group of four men returning from a pilgrimage to Benares, to their home on the foothills of Nepal. Each of the four men, as you can see, has two blown-glass jars, protected with wickerwork, slung to a short bamboo pole. These jars contain water which they have drawn from the Ganges at Benares and which they will sell drop by drop in their own and adjoining villages for religious ceremonies.

"And so on round the deck until I came to the last man on the left. This man, 1 told Crosthwaite, was an old friend of mine, the father of one of my workmen, who was crossing the river to plough his field on the left bank.

"Crosthwaite listened with great interest to all I had told him about the passengers on the lower deck, and he now asked me who the man was who was sitting on the bench near us. 'Oh', I said, 'he is a Mohammedan gentleman. A hide merchant on his way from Gaya to Muzaffarpur.' As I ceased speaking the man on the bench unfolded his legs, placed his feet on the deck and started laughing. Then turning to me

he said in perfect English, 'I have been greatly entertained listening to the description you have given your friend of the men on the deck below us, and also of your description of me. My tan hid my blushes, for I had assumed that he did not know English. 'I believe that with one exception, myself, your descriptions were right in every case. I am a Mohammedan as you say, and I am travelling from Gaya to Muzaffarpur, though how you know this I cannot think for I have not shown my railway ticket to anyone since I purchased it at Gaya. But you were wrong in describing me as a hide merchant. I do not deal in hides. I deal in tobacco.'" (Corbett, *My India*, 1952, chapter "Life at Mokameh Ghat" pg. 178-180)

Another good example of Corbett's mastery of deduction is his short story, dedicated to the alleged "wolf child", a small girl who was found in the jungle. After she was captured, it was discovered that she lacked any signs of normal human rearing. She walked on four limbs, ate raw food, made growling sounds, and was incapable of human speech. Unfortunately, before Corbett could meet her personally, the girl, who was named "Goongi" (meaning "mute"), died in the asylum where she was placed. Although Corbett never saw her, with sound and persuasive logic he was able to prove beyond any reasonable doubts that the girl was raised not by wolves, but by a bear.

We could give more examples of Corbett's amazing deductive abilities, for example, how he deducted that Mohan man-eater was suffering an injury, or why the Rudraprayag leopard changed his route, and many others, but I believe it is already clear that in Jim Corbett we have a case of extraordinary analytical and sharp

mind, the grandmaster of deduction, and a true Sherlock Holmes of the jungle.[28]

[28] By the way, this aspect of Corbett's personality is nicely discussed in a fictionalized book by Steven Alter "In the Jungles of the Night."

DEALING WITH CRITICS

Both Darwin and Corbett had their share of critics during their lives, and after their lives as well. How did they deal with them?

Quite differently. Frank and self-critical, they both were internally prepared for critical comments and often were first to publicly acknowledge their weaknesses. Charles was always up front about his doubts, criticised his ideas and his writing style. So, in the first place, they both carefully tried to clear all potential sources for possible criticism while they were writing their books. And still, like everyone, criticism, particularly in writing, had a negative effect on them.

Charles Darwin was more vulnerable. He was always emotionally affected by the critical comments, particularly when expressed in written form in scholarly reviews. His lack of official professional credentials was in my opinion the main reason behind this vulnerability. He was open to admit his faults, but he was still reluctant to be in a direct confrontation. As a result, he avoided direct clashes whenever possible. The phenomenon of "Darwin's bulldog" was created exactly for this reason, as Darwin was reluctant to discuss controversial issues, and his loyal follower Thomas Huxley was ready to engage in a fist fight with anyone to defend Darwin's views. And we need to remember that Darwin was criticised not only for theological reasons, but also for some of his other ideas as well, like the concept of sexual selection. Well, no scholar is immune from criticism, and many Darwin admirers can point to details from his writings they do not agree with. I must confess that despite my lifelong admiration for Charles Darwin, I also have expressed in some of my books (including this one) disagreement with the great scholar, for example, about neglecting the importance of predation in human evolution. I very much hope that Darwin would not have

been offended by my criticism, as he would have been able to see the point of argument, particularly when the argument had been presented in a good faith and without the vitriolic overtones so prevalent in some early critical reviews of his works.

Corbett was also conscious of potential critics for his stories, and the central point of his fears was that the readers would not believe the full documentary nature of his writings. Those who know Corbett's books well will agree that the reality of some of his stories was sometimes so dramatic that it was easily questionable.

Corbett knew that his readers might not take all his stories at face value. For this reason, Corbett did not include one of his best stories in his first book *Man-Eaters of Kumaon*. When it was published, Corbett did not know whether he would be asked to write other books as well, so he naturally tried to put in the first book the best stories he had. His first (and still the most popular) book had five man-eater tiger stories (no man-eater leopard stories): the very first man-eater (Champawat, 1907), the three man-eater tigers that he was asked about in the 1929 district conference, and his very last man-eater (Thak, 1938). For the three man-eaters that he was asked about in the 1929 conference, we know now that they were the Talla Des, Chowgarh, and Mohan man-eating tigers[29]. However, Corbett decided not to publish the Talla Des story in his first book and substituted it instead by the story of the Kanda man-eater that occurred four years later. The reason was that the Talla Des story was so unbelievably dramatic that Corbett was apprehensive that readers and critics might not believe him. Readers might remember that while hunting the Talla Des man-eater, Corbett was in a very fragile physical shape from a hunting accident,

[29] This inference comes from the conclusions of well documented research appearing in both volumes of the book *Behind Jim Corbett's Stories* (Logos 2016, 2020)

with a huge abscess inside his head and neck and his ear drum destroyed; therefore, he could not hear in one ear and could not see from one eye which was closed by the swelling of part of his face. In addition, the abscess was causing excruciating pain in his head, and he was unable to move his head freely from side to side. No wonder everyone around him, from doctors to his sisters, were dead against his tracking the man-eater in such a state, but Corbett had other ideas. Believing that the abscess was going to burst inside his head, leading to his death, Corbett was trying to use his hypothetically last remaining days to shoot the man-eater. The mission appeared suicidal, and his servants clearly knew this, although Corbett still never stated this explicitly. His reason for his actions, according to his own self-deprecating words, was that he was a "coward", unable to withstand sleepless suffering in his bed. Here are his words about the last night when his condition became critical, leading to the bursting of the abscess while he was following the tigress:

> "Back in camp I realized that the 'bad time' I had foreseen and dreaded was approaching. Electric shocks were stabbing through the enormous abscess, and the hammer blows were increasing in intensity. Sleepless nights and a diet of tea had made a coward of me, and I could not face the prospect of sitting on my bed through another long night, racked with pain and waiting for something, I knew not what, to happen... There was therefore an account to be settled between the tigress and myself, and that night was as suitable a time as any to settle it" (Corbett, *Temple Tiger and Other Man-eaters of Kumaon*, chapter "Talla Des man-eater", pg. 190)

Going after the man-eater on foot at night in such a condition was unbelievable behaviour, and that's why Jim did not want to put

this story in his first book. Only ten years later, when his first book became an international bestseller and was translated in many languages, during the meanwhile of which he wrote several other books including the *Man-eating leopard of Rudraprayag* and on other topics (*My India* and *Jungle Lore*), did he become satisfied that his writings were now accepted at face value, and it was then safe to tell the story of the Talla Des man-eating tigress.

This was the central reason this exciting story came out in the very last of his man-eater books the *Temple tiger and more man-eaters of Kumaon*, in the autumn of 1954, some eight months before his death. And there was more. Corbett had insisted with his publisher that his book *Jungle Lore* had to be read first, to understand some unbelievable details in the Talla Des story and this suggestion was included at the beginning of the narrative.

But even after his readers had read *Jungle Lore*, in which Jim wrote about the many skills he learned during a lifetime in the jungle, secrets of how to track animals, how to use jungle sounds to track the whereabouts of tigers and other animals, how to use our senses to hunt at night etc., after telling the story of Talla Des man-eater, he still felt compelled to write a remarkable "Epilogue" inviting his readers[30] to follow his footsteps to the India-Nepal border, where he hunted three man-eating tigers (Chuka, Thak, and the Talla Des man-eaters), and to inquire about the truth of

[30] It seems that Corbett's invitation to his readers to visit the scene of his hunts did not fall in deaf ears at all. Many went anonymously, coming from various corners of the world ever since the book was published. Some even went further by documenting their pursuit of Corbett's trails, as for instance, Peter Byrne in his book *Shikari Sahib* (Pilgrims book house, 2002), AJT Johnsingh in his book *On Jim Corbett's Trails and Other Tales of the Jungle* (Natraj 2004), Joel Lyall in his book *Jungle Tales* (Unicorn Books 2006), and our friends and colleagues of the Jim Corbett International Research Group in two volumes of the book *Behind Jim Corbett's Stories* (Logos 2016, 2020).

these events among the local villagers, a few of whom he cited by name. Professional writer and hunter Peter Byrne visited most of the Corbett's killing sites (Byrne, 2002).

It is strange that the story of the Talla Des man-eater has never been questioned by any of Corbett's biographers or researchers till date. It is the story of the Chowgarh man-eater that has attracted the largest amount of controversy, ever since its publication. Corbett's publisher in the UK, Geoffrey Cumberlege, even had to recourse to publish the full letter which Corbett had written to Maggie, a few hours after the hunt, on April 11, 1930, in the *Introduction to the World Classic Series* of 1960, when the book *Man-eaters of Kumaon* was selected to be published in a double volume with the other book, *Temple tiger and more man-eaters of Kumaon*. This, in a view to defuse a certain amount of criticism which had accumulated over the years, since the story was first published.

Despite this, one of Corbett's biographers, Martin Booth directly questioned the truth of some details in the story. He found it impossible to believe that a hunter following the trail of a man-eater, close at hand, would bother to pick up eggs (which Corbett said, in deference, in his story that these were rare, odd-shaped, nightjar eggs that were lacking in his collection) in his left hand and neglect safety concerns. Another biographer, Peter Byrne also remarked that giving his rifle to his men, even for a few seconds, was another mistake that Jim made on that day. Well, if Peter Byrne, himself a professional big game hunter, did not question Corbett's integrity, Booth accused Corbett of over-dramatizing his stories and using artistic license to embellish them. Booth did not pay attention to the fact that in the letter to Maggie, mentioned earlier, Corbett also clearly mentioned picking up and even returning the eggs to the nest.

Instead, Booth used other details mentioned in the letter, such as the lapse of time between seeing and shooting the tiger, 'in a heartbeat' in the letter to Maggie as compared to the apparent long process Corbett describes in the story in his book (see extract in a previous section), as being clear proof that puts serious doubts about the authenticity of the events. We now know, as mentioned in an earlier section of this book, that this is a clear example of slowing down of time during a critical moment, and the relative speed of the event in Corbett's mind was faster than the speed of the event itself, hence explaining the apparent contradiction. Most importantly, Corbett was trying to downplay the real danger of the situation (that his fate was in the hands of the man-eater) in a letter to his loving and caring sister, Maggie.

By the way, Corbett's dedication to his interest in the natural world, expressed clearly in paying attention to and picking up the rare eggs while he was in pursuit of a man-eating tiger, for me has interesting parallels with Darwin's dedication to collecting and classifying insects in his young years. He once famously placed a beetle in his mouth because he had run out of free hands to hold three interesting kinds of beetles that came to his attention at the same time.

Here I can also mention that Corbett had, and still has, his share of detractors for various reasons. Some cannot forgive that he was a trophy hunter earlier in his life; others cannot forgive that he was a Domiciled British, representing authoritative and abusive colonial rule in India, and left when India became independent; some search for the slightest inconsistence in his writings to declare them untrustworthy; and some even declare him a fully paid-up imperialist, although Corbett always refused the governmental rewards or bounties assigned on the life of the man-eaters that he shot.

Similarly, people are still trying to refute Darwin's theory of evolution of species through natural selection and/or sexual selection[31]; some trying to expose his liberty with facts when corresponding with Alfred Wallace, etc. (Interestingly I have never seen Darwin criticised for his love for shooting birds and hunting animals, which is often the case with Corbett). This is normal: every person of historical significance generates controversy that divides readers into followers and detractors. Even among the several social media groups that concentrate on Corbett's legacy, there are big differences in their treatment of Corbett's work and personality, ranging from treating Corbett as a demi-god closing their eyes to any discrepancies in his stories, to those who try to actively investigate and explain such discrepancies.

Every Corbett fan, every Darwin fan, has their reasons and attitudes towards their subject of reverence. And every perspective is equally valid, as all of them lead us to a better understanding of the complex and multidimensional nature of the legacies of Charles Darwin and Jim Corbett.

[31] Among those who refute and do not believe in Darwinism (concept name of his main theory), a large part of them consists of, so-called, creationists, that is, those who believe that there must be some intervening power (God, for instance) behind the creation of life on Earth and that all extinct and extant species, including humans were there at the very beginning and were the product of the creation event. It is very regretful that creationists choose to ignore that Darwinism does not even attempt to explain the origin of life and leaves ample space for the intervention of God for the creation of life and further, Darwinism explain partly, amongst others, the diversity of species and variety of subspecies as resulting from the struggle for existence due, for example, to external changes of their environment like geology or climate.

WHAT WE CAN LEARN ABOUT HUMAN EVOLUTION IF WE COMBINE DARWIN'S AND CORBETT'S EXPERTISES

Darwin is widely acknowledged as the father figure for biologists. It is therefore natural that in matters of human evolution his authority has been growing for the last 170 years and will probably grow further[32]. Corbett certainly cannot compete with Darwin in this department, but interestingly, Corbett had his unique field of expertise that, in my opinion, was sadly lacking in Darwin's array of expertise and interests in human evolution. Therefore, Corbett's insight could potentially contribute to Darwin's model of human evolution. That's exactly what we are going to do in this chapter. Let me explain.

Probably the greatest miss of Darwin's model of human evolution, in my opinion, is the near complete absence of our early ancestors' evolutionary strategies of defence from predators. Darwin famously dedicated his book on human evolution solely to the forces of sexual selection, virtually neglecting the role of natural selection, particularly one of the biggest factors of the evolution of any animal species – the relationship with their natural predators.

This neglect of defence strategies from predators has not only characterised Darwin's works; virtually all evolutionary scholars diligently followed the path paved by Charles Darwin and neglected the important sphere of defence from predators. There were (and still are) several reasons for this neglect.

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[32] From a very strict denial of Darwin's theory of the Descent of Man (and selection in relation to sex), on the brink of heresy, by religious authorities and creationists in the 19th Century, nowadays the concept that humans do not descend from primates, but humans ARE primates, is widely accepted.

First, as mentioned, many subsequent scholars followed the example of Charles Darwin, the greatest authority in the matters of evolution, in neglecting possible strategies of defence of human ancestors from predators.

Second, another influential figure of human evolution, Raymond Dart, whose discovery of *Australopithecus africanus* (based on a fossil hominin skull nicknamed the Taung Child) in 1924, became one of the largest supports in defence of Darwin's theory of human evolution at that time, also showed complete disdain toward matters of defence from predators for our distant ancestors. But instead of basing his theory on sexual selection, Dart avoided talks about early humans' defence mechanisms by declaring that our ancestors were apex predators and ruthless killers, feared by every other species, including all the major predators of the day[33]. The theory of the "killer ape", although not as strong as before (particularly after 1980s, when the scavenging hypothesis confronted the hunting hypothesis; see for example, Binford, 1986; Blumenschine, 1986; Shipman, 1986; Watts, 2008; O'Connell et al, 1988; Dominguez-Rodrigo. 2002), still maintains a strong hold on popular psyche (see on the phenomenon of hunting and prestige in Ehrenreich, 1997).

And third, many scholars are understandably under the spell of the contemporary sky-high position of our species in the natural world and take this towering position for granted for the whole evolutionary history of humankind. So, instead of finding how our

[33] This assertion would later be found to be in contradiction with his 1924 discovery since Raymond Dart and subsequent paleoanthropologists that studied the Taung child skull did not remark that the latter was most probably preyed upon by a large bird of prey. It was only in 2006, much after Dart's death, that South African paleoanthropologist Lee Berger found talon marks to the skull and eye socket of the Taung child, similar to those found in primates' skulls that are killed by eagles (Berger, 2006).

distant ancestors could have defended themselves from the predators of Africa in the early vulnerable period of their descent to the ground, scholars concentrate on internal competition between males for females. This is the reason why scholarly literature on human evolution is dominated by the means and strategies of obtaining females, that is, the mechanisms of sexual selection.

How did this happen? Why was Darwin so oblivious about this all-important sphere of the defence from predators in the first place?

We need to remember that at the time when Darwin was formulating his theory, the region of the world from where humankind evolved was still unclear. There were various suggestions, including all theoretically possible parts of the Old World: Africa, Asia, and Europe. Darwin was undecided about the place where humans evolved, and although Africa was one of the obvious possibilities (chiefly because two of the three great apes, chimpanzees and gorillas, our closest living relatives, still live there), he was no less sympathetic towards the European continent. Most important, when formulating his opinion, he suggested that humans could have evolved in the ecosystem of a big warm island, say, Australia, New Guinea, or Borneo, where human ancestors **were safe from the danger from major predators**. These are Darwin's concluding words of the fourth chapter of his 1871 book:

> *"The early progenitors of man were, no doubt, inferior in intellect, and probably in social disposition, to the lowest existing savages; but it is quite conceivable to consider that they might have existed, or even flourished, if, while they lost their brute-like powers, such as climbing trees, etc., they at the same time advanced in intellect. But granting that the progenitors of the man were far more helpless and defenceless than any existing savages, if they inhabited some*

warm continent or large island, such as Australia or New Guinea, or Borneo (the latter island being now tenanted by the orang), they would not have been exposed to any special danger*. In an area as large as one of these islands, the competition between tribe and tribe would have been sufficient, under favourable conditions, to have raised man, through the survival of the fittest, combined with the inherited effects of habit, to his present high position in the organic world"* (Darwin, 1871:157).

Of course, we would all agree, that if humans did evolve in such a predator-free haven, they would have no need to bother much about defence strategies against predators and could solely concentrate on winning females' disposition. Well, we know today that Darwin's dream of a safe ancestral home was very far from the harsh reality. Today we are sure that human ancestors originated and initially evolved in the ecological regions between forest-grassland mixture and open African savannah, arguably the place of the fiercest carnivore competition.

So instead of the safe ancestral home, our distant ancestors came from a truly "dangerous neighbourhood" with an abundance of predator species. From the various sabre-tooth cats and giant lion-size hyenas to the ancestors of the big cats living in Africa at that time, all were potentially lethal to a small-bodied primate that descended from the trees. If Darwin had known that our early ancestors lived for millions of years next to the fierce African predators, he would possibly have reconsidered the evolutionary forces that were applying pressure on them.

Our ancestors definitely had more concerns, in relation with Darwin's earlier proposal of struggle for existence, than winning the hearts of females, particularly since there is a possibility that our ancestors were living in multi-female-multi-male bands with

mostly unrestrained sexual contact between the members (on this matter see, for example, Foley & Gamble, 2009; Lovejoy, 2009).

But blissfully unaware of these dangers for early human ancestors from predators, Darwin concentrated on the totally new evolutionary force, sexual selection. This force was Darwin's mental offspring, and as he found a vast amount of confirming evidence of this principle in the natural world[34], he virtually "fell in love" with this newly found principle of sexual selection. So, he started explaining a tremendous amount of the morphological and behavioural characteristics of the natural world by this force. The unrestricted power of evolutionary progress in sexual selection was given to females (predominantly).

In contrast to evolution of species by natural selection, which required an objective reason for the development of new morphological or behavioural traits, sexual selection was the domain where the arbitrary decision of the females ruled. Hence, females and their tastes were also declared to be the leading force of evolutionary changes among humans. Arguably the most ardent proponent of sexual selection, Geoffrey Miller, openly decreed: "For the most part adult male hominids must have been rather peripheral characters in human evolution, except as bearers of traits sexually selected by females for their amusement value or utility" (Miler, 2000:109-110).

So, quite paradoxically, although Darwin proposed in his first big book in 1859 that the leading force for evolution of natural

[34] Among the evidence for evolution of species by sexual selection is the famous Darwin's riddle (or puzzle), namely the peacock (see book cover) and its tail which he referred to as 'nature's extravagances', which could not be explained at the time by his former theory of evolution through natural selection. On the new prospects and contradictions on this subject see Takahashi et al., 2008; Petrie et al., 1991; Barras, 2008; Loyau et al., 2008; Viegas 2008; Jordania, 2021.

world was natural selection, in his second big book, released in 1871, when it came to the evolution of humans, Darwin virtually rejected his principle of natural selection and instead declared that the evolution of humans was the result of sexual selection (sorry for repeating this again!).

Even when some scholars did not agree with Darwin's idea and tried to view the theory of sexual selection as a part of the bigger theory of natural selection (Alfred Wallace, the co-discoverer of the theory of natural selection, was among them). Darwin maintained that sexual selection was a separate evolutionary force, equal in importance to the principle of natural selection. The title of Darwin's 1871 book leaves no doubt about the strength of his belief in sexual selection in human evolution: "*The Descent of Man and Selection in Relation to Sex*".

Therefore, when it came to the evolution of humans, evolution of species through natural selection, the greatest theoretical discovery by Darwin, known as the foundation of Darwinism, went off the picture. This left a huge void in the further development of understanding of human evolution, as the crucial evolutionary pressure that leads to the formation of any animal species, defence strategies against predation, was almost completely neglected. I wrote "almost" as there were some relatively timid attempts to bring new perspectives in the story of interaction with predators in human evolution during their long tenure in the African savannah.

What attempts exactly am I talking about?

First, as already mentioned, Raymond Dart, proposed the "killer ape theory." This theory created a model of early human evolution in Africa, where there were plenty of predator species, but still, for Dart, the need for early human defence was irrelevant (Dart, 1949, 1953; see also Ardrey, 1961).

There was another line of thought, based on very different assumption, proposing that our ancestors were not apex predators, as Dart proposed; but were rather a humble prey species, whose best defence option was to climb trees (Brain, 1981; Hart, Sussman, 2005). Well, this idea was not as appealing to humans as Dart's idea of our ancestors being the greatest big game hunters.

And finally, with a great pleasure I want to mention the rare works of Dutch scholar Adriaan Kortlandt, probably the only scholar who took the question of early human defence strategies seriously and actively tried to discover the possible defence strategies and weapons that our ancestors could have used against lions and other major predators. In his two ground-breaking works, based on his field observations in the 1960s, he found that chimpanzees, our closest living relatives, used clubs and threw objects at leopards (Kortlandt, 1965). Later he tried to argue that human ancestors could have used thorny bushes as potent weapons to scare away lions and other predators (Kortlandt, 1980). I therefore believe it would be a fitting tribute to the contribution of this Dutch scholar to dedicate a conference focused on defence strategies in human evolution to his memory. Such a conference is planned in Tbilisi, in June 2023.

Now, after giving the general picture of the poor state of the research literature on the defence strategies of early humans, I want to discuss what Corbett's expertise could have brought to the table.

With his encyclopaedic knowledge of big cats and human-predator conflict, Corbett was way ahead of his time, and in some cases possibly even ahead of 21st-century scholarship. The point where Corbett's ideas and expertise makes contact and complements Darwin's ideas is exactly here: **How early humans could have dealt with big powerful predators on the African Savannah?** Corbett

was arguably the best world expert on human-predator relationships, and now we are going to discuss the implications of his practical knowledge for the defence strategies of early humans.

So, we have an interesting situation: from two heroes of our book the first hero (Darwin) formulated the general model of human evolution but missed the important sphere of defence strategies from major predators, and the second hero (Corbett) was the greatest expert of exactly this sphere – human relationships with big predators.

To discuss all the possible important points, I will try to formulate several principles of the human-big cat relationship that are crucial to understand. These principles were all mentioned and discussed by Corbett in his books.

Avoidance

Probably the **first important principle** that we need to remember is that contrary to popular belief, **big cats generally try to avoid meeting humans in the wild**. I am not claiming that Corbett established this fact. Hundreds and even thousands of human generations who lived in proximity to lions and tigers knew this fact from everyday experience. Still, Corbett was one of the first to bring this knowledge to a wide circle of readers, particularly European and American readers.

Let us confess – there is something unusual for many people in this bold assertion since it is popularly believed that lions and tigers would not miss a chance to hunt badly-running and defenceless humans. Such fears are fuelled by the fact that every now and then there are cases of big cats and other big predators killing and eating humans. This naturally happens in countries where big predators live next to humans (like in Southern Asia, or Africa). Man-eating tigers, lions, and leopards have a powerful image in our collective psyche.

The belief that lions and tigers are all potential man-eaters is in conflict with reality. Thousands of Indians and Africans live and work in the vicinity of lions and tigers daily, and still cases of their attacks on humans are very rare[35]. Corbett wrote that humans are not a natural prey for tigers and leopards, and they try to stay away from humans. Corbett insisted that for tigers to start hunting humans, two conditions must exist: (1) being disabled by a wound (inflicted by humans or other animals, chiefly porcupine quills) or by old age, and (2) an accident that pushes humans closer to the tiger in a vulnerable state. Let us pay attention to the second condition.

It is important to remember that not all wounded or old tigers turn into man-eaters. If this were the case, there would be many more thousands of humans killed by tigers every year. Most wounded and old tigers die from illness and hunger without ever attacking any human. It is when the tiger, incapacitated by wounds or old age, is accidentally brought in close contact with humans that this conflict gives the tiger the dangerous idea that humans are easy to prey for food. In the introduction of *Man-Eaters of Kumaon* (Oxford University Press, 1944) Corbett gives a classic example of a young tigress becoming a man-eater as a result of an unfortunate string of events, first the tragic encounter with a porcupine and then the accidental killing of two humans:

> "A tiger when killing its natural prey, which it does either by stalking or lying in wait for it, depends for the success of its attack on its speed and, to a lesser extent, on the condition of its teeth and claws. When, therefore, a tiger

[35] One exception might be in the Sundarbans delta between India and Bangladesh where tigers are more aggressive than usual and the rate of attacks on humans is significantly higher than for other regions (Neumann-Denzau & Denzau, 2010).

is suffering from one or more painful wounds, or when its teeth are missing or defective and its claw worn down, and it is unable to catch the animals it has been accustomed to eating, it is driven by necessity to killing human beings. The change-over from animal to human flesh is, I believe, in most cases accidental. As an illustration of what I mean by 'accidental' I quote the case of the Muktesar man-eating tigress. This tigress, a comparatively young animal, in an encounter with a porcupine lost an eye and got some fifty quills, varying in length from one to nine inches, embedded in the arm and under the pad of her right foreleg. Several of these quills after striking a bone had doubled back in the form of a U, the point, and the broken-off end, being quite close together. Suppurating sores formed where she endeavoured to extract the quills with her teeth, and while she was lying up in a thick patch of grass, starving and licking her wounds, a woman selected this particular patch of grass to cut as fodder for her cattle. At first the tigress took no notice, but when the woman had cut the grass right up to where she was lying the tigress struck once, the blow crushing in the woman's skull. Death was instantaneous, for, when found the following day, she was grasping her sickle with one hand and holding a tuft of grass, which she was about to cut when struck, with the other. Leaving the woman lying where she had fallen, the tigress limped off for a distance of over a mile and took refuge in a little hollow under a fallen tree. Two days later a man came to chip firewood off this fallen tree, and the tigress who was lying on the far side killed him. The man fell across the tree, and as he had removed his coat and shirt and the tigress had clawed his back when killing him, it is possible that the smell of the

blood trickling down his body as he hung across the bole of the tree first gave her the idea that he was something that she could satisfy her hunger with. However that may be, before leaving him she ate a small portion from his back. A day after she killed her third victim deliberately, and without having received any provocation. Thereafter she became an established man-eater and had killed twenty-four people before she was finally accounted for.

"A tiger on a fresh kill, or a wounded tiger, or a tigress with small cubs, will occasionally kill human beings who disturb them; but these tigers cannot, by any stretch of imagination, be called man-eaters, though they are often so called" (Corbett, 1944, *Man-Eaters of Kumaon*, "author's note" pg. XI)

In this extract Corbett gives a brilliant account of the various circumstances and pressures that can turn a tiger into a man-eater:

1. Tigers can accidentally kill humans, but this is more of a tragic mishap, not a purposeful hunt for human as prey;
2. The first requirement for establishing a man-eater is when the tiger gets wounded (by humans or other animals, including its own congener), and the wound incapacitates the tiger's ability to catch its natural prey;
3. The accidental killing of humans, can give the tiger the idea that humans can be used for food;
4. After the succession of such events the tiger is potentially on the path to start stalking humans on purpose and become a man-eater.

Eating human flesh when starving or during primitive tribal rituals is acceptable for humans, as reported in several historical accounts, and we do not usually punish such humans. But when

it comes to a starving animal, eating human flesh is considered a capital crime punishable mostly by death. We do have double standards for humans and animals, and Corbett mentioned this injustice many times.

The fact that tigers and lions naturally avoid humans was confirmed later by field studies of many scholars. According to ethologists (see, for example, Schaller, 1972, or Bertram, 1972), lions in the wild would flee when they see even an unarmed human on foot. Brian Bertram, who studied lions in the Serengeti during the same period as George Schaller, wrote: "All my observations were made from a Land Rover, not for the reasons one might think but because lions in the wild are afraid of humans on foot" (Bertram, 1972:33), and "If I had got out of my Land Rover and shouted out and waived my arms, the lions would have run off, for almost all wild lions are still afraid of humans on foot" (pg. 43). During another field experiment George Schaller and Gordon Lawther covered about 160 kilometres on foot in the Serengeti, encountering a number of lions (seven groups), and, according to their report, "All the seven lion groups that we encountered while we were on foot fled when we were at distances of 80 to 300 metres" (Schaller & Lowther, 1969:328).

There is more. Even when big cats attack humans, they treat them differently from other prey species. According to George Schaller, lions attack their prey animals with a so-called "alert face", silently, with a closed mouth, and with forward-pointing ears. However, they attack humans with open mouth, ears back and grunts[36], exactly the same way as they attack fellow lions. Why this difference? Let us listen to Schaller:

[36] The approximate rendition of these grunts for lions and tigers is a series of 'wruff…wruff…wruff' in the same loudness and pitch that they would do when charging their congener during fights. (Editor's note)

"As mentioned before, the cat uses the alert face in such a situation [when hunting], not a bared-teeth face as is usually indicated in museum exhibits. On the other hand … lions attack man with bared teeth. The exposed teeth represent a defensive reaction, whether in response to another lion, man, or an attacking prey animal; in other words, they contain an element of fear" (Schaller, 1972:98).

Interestingly, lions are afraid of humans even when attacking them[37]!

Human freezing reaction

Another interesting element of human-big cat interaction is that the proximity of lions and tigers often triggers in humans not the fleeing reaction, but a **freezing reaction**. Freezing, as an aposematic aggressive gesture, is still the best defence strategy when we suddenly find ourselves in the company of a big and dangerous predator. The worst strategy is to try to run away. We Have already mentioned and discussed this important issue earlier.

Now let us briefly discuss human behaviour in relation to their interactions with predators.

Singing

Darwin famously proposed that singing both in animal and human species was mostly developed to attract the attention of the females. This line of thinking has a solid following today (see, for example, Miller, 2000).

Unlike Charles Darwin, Jim Corbett was probably the first who noted that attracting attention by singing is a powerful tool to **avoid an attack from predators**. This is a very interesting element of an

[37] Here, it must be mentioned that Schaller's observations are for normal lions. Currently, there are no documented description for the attack of a true man-eating lion/ tiger on humans, nor any study on their behaviour while hunting humans except the inference made by Corbett in observing clues and trails that lead to the killing.

aposematic defensive behaviour. Aposematic behaviour, unlike the cryptic behaviour (hiding and keeping low), means that prey species try to avoid attack by behaving bravely, making noise, walking slowly, having body odour, and not running away.

As discussed, in the story about the Chowgarh man-eating tigers Corbett had to let his unarmed men go through the territory of the man-eater, with a big chance of having the man-eater stalk them and trying to secure a human victim. So instead of suggesting that they be as quiet as possible as they walked through the jungle (cryptic behaviour), he advised them to go all the way loudly singing (aposematic behaviour). This is exactly happening when villagers go in Sundarbans to collect honey: they sing, and generally try to make as much noise as they can.

Even many contemporary scholars are not aware that singing while walking in a forest or a jungle can be an effective defensive strategy against predators. Unlike scholars, many simple and often uneducated villagers who live day by day very close to dangerous predators know this fact very well. For example, pygmies often sing while going through the jungle to avoid a leopard attack (Turnbull, 1961:58). It is possible that Corbett learned this from his friend, the poacher Kunwar Singh who taught him the ways and habits of the local animals when he spent his winters in Kaladhungi during his childhood.

Singing (and generally, being noisy), for obvious reasons, is mostly a dangerous activity in the animal world, as it exposes the singer's whereabouts to prospective predators. Even predators do not indulge in too much singing, as concealing their whereabouts from their prey species is also important. Interestingly, singing is particularly avoided by species who live on the ground[38]. Singing

[38] Humans are among the very rare terrestrial species that sing. Mostly arboreal birds and primates are singers (Jordania, 2020).

is much more prevalent among arboreal and aerial species. The reason is that unlike the ground, where everyone lives on the same "ground level", different species live on the trees at various heights (Jordania, 2017). Heavier animals occupy the lower branches of a tree, and lighter animals occupy higher branches that are not accessible for heavier animals (Jordania, 2020). So, a 5 kg monkey can sleep safely or be noisy on thinner branches higher up the tree because a 30-50 kg leopard cannot climb the thinner branches to reach the monkey.

On the other hand, singing, and generally creating a noise, can be a strategy of avoiding predators by scaring them away. Adriaan Kortlandt, mentioned above as virtually the only scholar actively interested in defence strategies in early humans, observed that chimpanzee groups often make a big noise in the evenings, correctly proposing that they are warning all the potential predators in the vicinity about their group size and unity. In a similar fashion, Kortlandt noted that human tribes living in the savannah or jungles often organise a kind of loud evening "concert", most likely to send the same warning message to potential predators (Kortlandt, 1973. See also Hagen & Hammerstein 2009-2010). This shared chimpanzee-human habit of loud evening displays may be one of the oldest traditions of our species, aimed at finding night safety in group numbers and communal strength. I even proposed that one reason that most musical and theatrical performances in human cultures are organised in the evenings, can be connected to our long evolutionary tradition of noisy evening displays that sends a warning to potential predators on one hand and gives the members of the group a sense of communal safety on the other hand (Jordania, 2014:195-196).

Singing, or just making a noise to warn predators and send a message about the size and unity of the group, is a clear element

of aposematic defence. I stress this idea in many of my works, and I might be the first to do this among evolutionary musicologists, but I want to admit that probably the impetus for this idea came from reading the works of Jim Corbett, arguably the greatest expert on human defence strategies from potential predators.

Cannibalism

Now let us discuss the defence potential of the cultural tradition of cannibalism. Free access to unburied human corpses is widely regarded today as an important factor that pushes big predators towards man-eating habits (on human cannibalism see e.g., Roach, 2002; White, 2001; but see also Arens, 1979). Wars, famine, epidemics, even illegal immigration through the wilderness can contribute to the rise of man-eaters in the affected regions. Such cases are well-represented in human history –for example, in the Burma war 1942 (Perry, 1964:197), in the Vietnam war (Neuman-Denzau, 2006: 6), or in the slave trade routes (Peterhans & Gnoske, 2001:9-12. See also: Baldus, 2004; Packer et al., 2005);

Corbett was arguably the first who noted that man-eating among big cats increases when the predators can find many human corpses left unburied after massive epidemies:

> "Leopards … are to a certain extent scavengers and become man-eaters by acquiring a taste for human flesh when unrestricted slaughter of game has deprived them of their natural food.
>
> "The dwellers in our hills are predominantly Hindu, and as such cremate their dead. The cremation invariably takes place on the bank of a stream or river in order that the ashes may be washed down into the Ganges and eventually into the sea. As most of the villages are situated high up on the hills, while the streams or rivers are in many cases miles away down in the valleys, it will be realized that a funer-

al entails a considerable tax on the man-power of a small community when, in addition to the carrying party, labour has to be provided to collect and carry the fuel needed for the cremation. In normal times these rites are carried out very effectively; but when disease in epidemic form sweeps through the hills and the inhabitants die faster than they can be disposed of, a very simple rite, which consists of placing a live coal in the mouth of the deceased, is performed in the village and the body is then carried to the edge of the hill and cast into the valley below.

"A leopard, in an area in which his natural food is scarce, finding these bodies very soon acquires a taste for human flesh, and when the disease dies down and normal conditions are established, he very naturally, on finding his food supply cut off, takes to killing human beings.

"Of the two man-eating leopards of Kumaon, which between them killed five hundred and twenty-five human beings, one followed on the heels of a very severe outbreak of cholera, while the other followed the mysterious disease which swept through India in 1918 and was called 'war fever'" (Corbett, 1944: XV-XVI).

As mentioned, most contemporary behavioural ecologists and ethologists agree that having a free access to human bodies is one of the main factors in turning big predators (mainly big cats – tigers, lions, leopards) into man-eaters (see the good review of the subject in Waltl, 2016), which naturally suggests the reasons behind the origins of the ancient widespread and quite mysterious human tradition of cannibalism.

Let us now pay attention to several factors that naturally follow Corbett's observation, that leaving unburied human bodies increases the chances of man-eating habits in predators:

1. Removing dead bodies was (and still is) important to control big predator species from attacking humans;
2. Humans from various cultures today have many ways to dispose of dead bodies, but our early ancestor had only two options: to eat the bodies or leave them to scavengers; These two options had very different long-term consequences;
3. Groups that took the tradition of cannibalising the bodies of their loved ones were gradually rewarded by having predators attacking them much less than groups who did not practice cannibalism (particularly endo-cannibalism –eating the bodies of deceased relatives and group members); (Jordania, 2022).
4. Even when the very hungry lion would attack and kill one group member, the rest would follow the attacker and bravely fight the aggressor to reclaim the dead body;
5. Although this dedication to fallen loved ones would not bring the fallen one back to life, there was a larger positive result since with their fearless dedication humans were teaching predators to leave them alone; (Jordania, 2022).
6. Fighting for the bodies of fallen comrades and cannibalising their remains became an act of utmost respect and love; (Jordania, 2022).
7. Human aposematic defence was strengthened by the religious dedication of members to their group, and their fearless behaviour taught predators to stay away from the early humans. This general avoidance of humans is still very clear in most of big predator species.
8. As sometimes they also had to deal also with the dead bodies of rival group members who would attack them, people also ate the bodies of their enemies but with a totally different feeling – the sense of aggression, vengeance, and annihila-

tion, turning them into animals. It was very different from the love and respect for the cannibalized bodies of their own group members; (Jordania, 2022).

9. The ritualized cannibalism (of their own group members, or endocannibalism) as an expression of love is still evident in some tribes that still practices cannibalism (see, for example, Conklin, 2011).
10. Amazingly, our contemporary human languages also show the ample remnants of our ancient attitude towards cannibalism as the utmost love: this happens when we declare that we like a cute baby, a puppy, a kitten, or a boyfriend-girlfriend so much that we want to eat them. This atavistic expression of cannibalism as love seems to be universal for all languages; I hope one day there will be a formal cross-cultural study of this idea, which is so far only my proposition based on a limited number of representatives of the cultures I asked. (See Jordania, 2022).
11. Apart from the remains of cannibalism as an expression of love and respect in human languages, many religious rituals include consuming the flesh of sacred religious figures, including the mystery of the Eucharist when believers symbolically consume the flesh and blood of Jesus.

Therefore, we have several important points from Corbett's experience of human-animal conflict that enrich our understanding of early human defence strategies after they descended from the relatively safe trees to the predator-infested ground:

1. It is fact, that lions, tigers and other major predators try to stay away from humans in the wild and run away when seeing humans on foot;

2. The best advice for humans who find themselves in close proximity to a dangerous predator is not to run away, advice strengthened by our instinct of freezing;
3. Singing and being generally noisy while going through jungles with potentially dangerous predators is a powerful defence even from predators that are already man-eaters; Habits of honey collectors in the Sundarbans delta, mentioned earlier, is a good proof of this.
4. One of the most effective means to stop predators from attacking humans (or, in other words, to 'stop predators to get a liking for humans as prey) is to eliminate their free access to human corpses;
5. Cannibalism, as a means of eliminating human bodies, was favoured by natural selection and probably became one of the first rituals, expressing love and dedication toward the cannibalized members of the group;

I hope readers can agree that with these additions Darwin's model of human evolution could become more comprehensive. Instead of leaving entire evolutionary changes to *Homo sapiens* to the forces of sexual selection via female choice, we now can have a fuller story of the evolution of our species, in which predators applied a tremendous pressure on our morphology and behaviour.

With this new combined Darwin-Corbett unity, human evolution becomes a story of a tree-living primate species that came down from the trees, but unlike their closest extant relatives, apes, who also became mostly terrestrial (chimpanzees, gorillas, and arboreal bonobos), they went their own, alternative evolutionary strategy:

1. Instead of stopping singing and becoming silent, like the terrestrial apes did, our human ancestors became louder and

even developed rhythmically organized group singing. (By the way, in case if you think that chimpanzees are noisy species, consider the words of the world expert of primate communication, Tecumseh Fitch that "many animals, particularly the chimps I am studying right now, are surprisingly silent most of the time". Personal email from June 10 of 2008).

2. Instead of increasing their body strength in order to fight predators, human ancestors decreased their strength and conversely developed their shoulders, acquiring the ability to throw rocks and branches accurately (Perry, 1983; Reinold, 2010). Effectively, they managed to develop a potent defence strategy of distant, missile-based non-contact forms of combat;
3. Instead of increasing tooth size (particularly canine), as other terrestrial apes did, human ancestors decreased tooth size, as their newly developed affective non-contact group defence allowed them to alleviate stress from their teeth, enabling their mouths to become more flexible for larger variety of vocalizations and future language and speech;
4. Instead of staying half-crouched to the ground as other non-aposematic apes do, human ancestors stood up fully erect and even increased their height by growing long hair on top of their heads;
5. Instead of keeping a strong hide densely covered by coarse hair, our ancestors lost the need for this defence from physical combat with predators, lost most of the hair, the hard skin, and, as the by-product of this process, lost at least some parasites from their body hair;

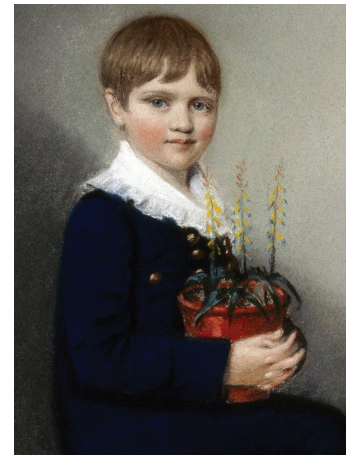
In short, our ancestors went their own evolutionary path from other apes, primarily based on aposematic strategy, and developed

non-contact forms of defence, using various missiles. (By the way, under the term “non-contact forms of defence,” I include defence by using clubs and sticks, as “contact forms of defence” in the animal world means full contact with teeth, skin, and body.) They were ingenious in the developing the arsenal of their missiles, starting from rocks, then spikes, later arrows and crossbows, and gradually reaching canons, muskets, rifles, machine-guns, and finally the ballistic nuclear missiles.

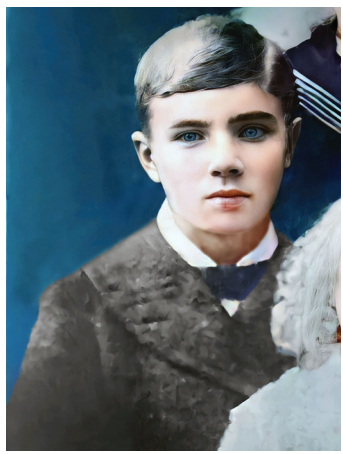
Our means of defence and attack gradually became so powerful that it created imminent danger not only for animals and humans, but for life on earth in general, which is why the green movement and environmentalist strategies are probably the central concern for the future of our planet and human politics. Although we still instinctively follow the general rule of natural selection, and try to become more numerous and more dominant, we need to be aware of the destructive power we have and to limit the stress we put on the living planet, give more space to animal species that inhibit our world.

The biophilia hypothesis, the love of all living beings expressed so strongly by the two heroes of our book, Charles Darwin and Jim Corbett, has to grow in each member of humanity. This is the central point that their lives each us.

Robert Darwin, Charles' domineering father, whose poor view of Charles was a source of much anxiety and may have contributed to Charles's health problems in adult life. From an oil painting by James Pardon (1811–1829), (From Wikipedia).



Early painting (by Ellen Wallace Sharples) of seven-year-old Charles, who is depicted happily embracing a pot of thriving flowers. This passionate love of all life forms would remain with Charles all his life. (From Wikipedia).

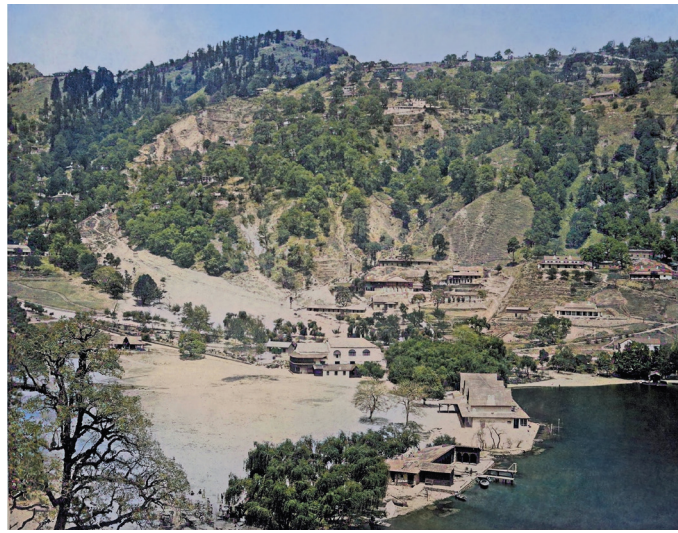


Young Jim Corbett lived in between two places – Kaladhungi and Nainital, both close to the wildlife that Jim adored. This photo was believed (according to the Kaladhungi Museum from 2014) to be of Jim, but recently doubts have appeared that this might be Jim's older brother, John Quinton Corbett. In this case we do not have any confirmed photo from Jim's childhood.

Note: Archival B/W photos, mostly from Wikipedia, are colorized by Khawar Mahmood

Emma Darwin (née Wedgewood) - Charles's highly educated wife and he were first cousins, and she was his greatest friend. They had a long happy marriage, producing ten children, seven of whom lived to maturity and achieved professional fame. (Photo from Wikipedia).

Annie Darwin, Charles's dear daughter, whose death greatly affected him, including his beliefs. (The original B/W photo from Wikipedia).



Nainital before (in 1875) and after the 1880 landslide disaster. The Corbett family lived on the slope adjacent to the devastated area (to the right on the photos), and at age five Jim was likely deeply affected by witnessing the disaster. (The original B/W photos from Wikipedia).

Inside Charles Darwin's work room: the scholar's personal chair had wheels. (Author's photo, 2016).

Jim Corbett's house in Kaladhungi, today a busy state museum. It was here that Jim preferred to sleep outside the house, in his famous 12-lb. tent. (Photo by Stuart Gelzer).

Jim Corbett's family in 1899. From left: Eugene Mary Doyle, John Quinton Corbett, Mary Jane Corbett, Edward James Corbett and Margaret Winifred Corbett. This photo is most likely taken on the event of Archie's funeral who died at the age of 20 in 1899. This photo is taken in the yard of Gurney House, at the same place where the flower clay pots stood in the backdrop for the photo of Corbett's first four man-eaters – taken more than a quarter of a century later. (The rights on the photo belong to the JCIRG archive).

The full skull and skin mounts of the first four man-eaters killed by Corbett, from left to right and in chronological order: Champawat man-eater (436 victims, 1907), Muktesar man-eater (24 victims, 1909), Panar man-eating leopard (400 victims,1910), and the Rudraprayag man-eating leopard (125 victims, 1926). Corbett killed six more man-eating tigers, always regretting these tragic necessities. (The rights on the photo belong to the JCIRG archive).

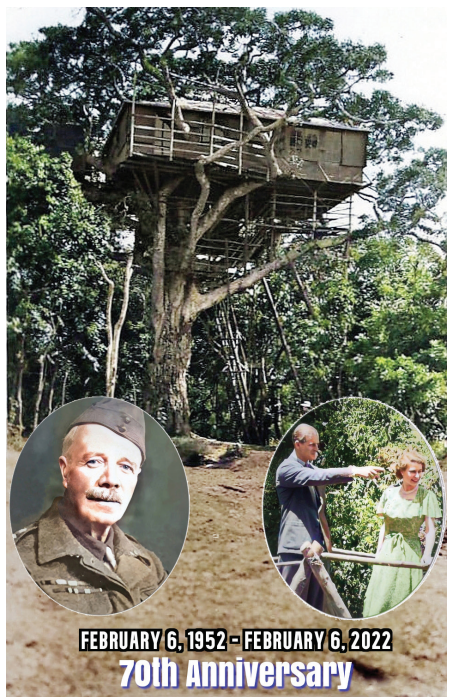
The Champawat bungalow from outside, where Corbett had a mysterious and frightening experience, forcing him to spend the cold night on this verandah. (Author's photo, 2014)

Inside the Champawat bungalow where Corbett had a mysterious experience discussed in this book. (Photo by Manfred Waltl, 2014).

My unforgettable meeting with the skin of the Thak man-eater, the last man-eater killed by Corbett at the age of 63. I am reading the story together with its central participant… (Courtesy of Brian Walck, the grandson of Henry Walck, Corbett's USA publisher, who was given this full skull and skin mount by Maggie Corbett after Corbett's death).

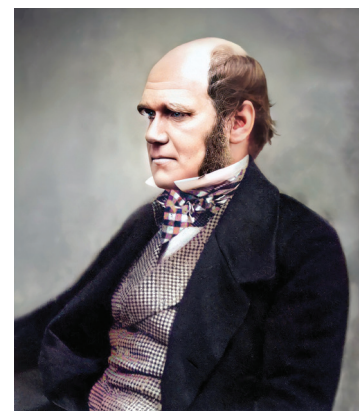
The author meeting the pioneering researcher of Jim Corbett's legacy, Peter Byrne, in the USA, 2015.

Greeting princess Elizabeth in Kenya in 1952.
(The B/W original from Wikipedia)



The 70th anniversary of the historic meeting of HRH Princess Elizabeth with Jim Corbett at Tree Tops Hotel was celebrated worldwide by Corbett followers. (Photo composition by Khawar Mahmood).

The future Queen with her father. Both Elizabeth the II and King George the VI dearly loved nature and spent their last days as Princess and King, surrounded by nature.



Photography became available in the 1840s, and this is one of the first photographic images of Darwin, colorized by Khawar Mahmood. (The B/W original photo from Wikipedia)

Iconic photo of Colonel Jim Corbett, published in the first edition of Man-eating Leopard of Rudraprayag (1948, OUP). (From the original B/W photo)

Nainital “Gurney House” where Jim lived happily with his family until they left for Kenya. (Photo by Stuart Gelzer, 2018).

Inside of the “Gurney House” are plenty of artefacts of Jim Corbett’s rich family legacy: furniture, books, hunting trophies, and photos on the wall. The house is maintained by its current owner, Nilanjana Dalmia, whose grandparents bought it from Jim and Maggie in 1947.

Maggie’s piano: witness of joyful family celebrations at Corbett’s Nainital house. Music was a big part of their life. Jim had nice tenor voice, and also played guitar and flute. Courtesy of Nilanjana Dalmia, current owner of “Gurney House.”

One of the last photos of Jim Corbett in Nyeri, 1954. (The rights on the photo belong to the JCIRG archive).

The Jim Corbett International Research group started as an informal group of Corbett legacy lovers and researchers, gradually forming the FB group, them the "Jim Corbett International Research Association", and finally, the "Jim Corbett International Research Centre" at Tbilisi Grigol Robakidze University. This photo was taken in Kala Agar, during one of our trips to India in 2018. We are discussing the plan of action to locate the Chowgarh man-eater killing site. From left clockwise – Manfred Waltl (Germany), Preetum Gheerawo (Mauritius), Priyvrat Gadhvi (India), Joseph Jordania (Australia), Fernando Oliveira-Quevedo (Brazil), and Paata Natsvlishvili (Georgia). (Photo by Stuart Gelzer).

CONCLUSIONS: BEYOND APRIL THE 19TH

Isn't it amazing how little we change from our childhood? Charles Darwin was passionate about classifying lifeforms around him, and Jim Corbett was totally fascinated by the wildlife in the jungle and was passionate about classifying jungle creatures. I remember myself how fascinated I was by all the strange behaviours and amazing features of morphology of some animal species, knowing intrinsically that there always were logical reasons behind all these apparently strange facts and features. I was lucky to find lifelong role models and unfailing soulmates in Charles Darwin and Jim Corbett, although I found them at different periods of my life, and they had different types of influence on my life.

I found Charles Darwin earlier than I found Jim Corbett. Darwin entered my life before my teenage years. Darwin and his theory of natural selection were obligatory for school children in Soviet Union. As a diehard reader of a wide range of books and various encyclopaedias I knew about Darwin even before I was taught about him at school. Also, I found out early that I shared my birthday with the great scholar, and that made me feel more connected to my hero.

Here I must say the there was a curious misinterpretation of Darwin's legacy in the Soviet Union, though. As a strictly atheistic country, all the ambivalent feeling Darwin had toward the figure of God, his expressions that for him there was no contradiction to be a scholar believing in evolution and at the same time believing in God who could answer all the big questions humans cannot answer, were strictly off limits for the Communist ideology. For all Soviet citizens Darwin was presented as a militant atheist. Of course, under the façade of strict atheism, many Georgians maintained traditional Christian beliefs, but showing this in official

life was totally banned. Only much later, when I was able to read uncensored Darwin in English, could I understand the complexity of his beliefs and the turmoil that the great scholar experienced throughout his life. And this realisation made a big change in my personal worldview. I do not know how many humans can claim that reading Darwin's writings made them more religious, but that's exactly what happened to me.

When I think of the reasons that attracted me to the works and personality of Charles Darwin, I found the words that American philosopher and animal activist James Rachels, wrote about Darwin, express it perfectly:

> "A few years ago, I set out to canvass the literature on Charles Darwin. I thought it would be a manageable task, but I soon realised what a naïve idea this was. I do not know how many books have been written about him, but there seem to be thousands, and each year more appear. Why are there so many? Part of the answer is, of course, that he was a tremendously important figure in the history of human thought. But as I read the books - or, at least, as many of them as I could - it gradually dawned on me that all this attention is also due to Darwin's personal qualities. He was an immensely likeable man, modest and humane, with a personality that continues to draw people to him even today. … Darwin's strong feelings about slavery are expressed in many of his writings … His comments there are among the most moving in abolitionist literature. But it was his feelings about animals that impressed his contemporaries most vividly. Numerous anecdotes show him remonstrating with cabdrivers who whipped their horses too smartly, solicitously caring for his own animals and forbidding the discussion of vivisection in his home. At the height of his fame he wrote

an article for a popular magazine condemning the infamous leg-hold trap in terms that would not seem out of place in an animal-rights magazine today" (Rachels, 1993:152).

In 2017 I had an interesting experience; a glimpse of what Darwin would have felt when he was invited to debate on evolution with religious scholars. That year, I was invited to take part in a public debate on the function of music from evolutionary and religious perspectives. The debate was planned with Prof. Geremy Begbie, Thomas A. Langford Distinguished Research Professor of Theology at Duke Divinity School, Duke University, the director of Duke Initiatives in Theology and the Arts. According to his website, Prof. Begbie is a systematic theologian whose primary research interest is the correlation between theology and the arts, in particular the interplay between music and theology. He is also an Affiliated Lecturer at the Faculty of Music at the University of Cambridge. So, the public lecture-debate was planned between Cambridge and Melbourne university on October 12, 2017, 5.15 pm. The discussion was widely advertised and eagerly anticipated. Unfortunately, a few days before the scheduled discussion, on October 3 Prof. Geremy Begbie was involved in a minor car accident, and the debate had to be cancelled. This small moment helped me to better understand the feelings Charles Darwin must have had. At the same time, I was well aware that general attitudes towards the theory of evolution have undergone a substantial shift since the middle of the 19th century.

Corbett entered my life much later when I read, for the first time, the Georgian-translated version of *Man-Eaters of Kumaon* in 1970. I was 17 years old, and I remember the huge impression that the book made on me. The stories were riveting, I could not stop reading them, and I probably have read them many dozens, if not hundreds of times since. But the biggest impression was from the

personality of the author, a candid, unassuming, brave, simple man, lover of animals and underdogs, bearer of many talents, a true personification of a positive hero. And this reverence for Corbett has stayed with me for the rest of my life. I can candidly say that I have never read a book that absorbed me more than *Man-Eaters of Kumaon*. Subsequently, I read Corbett's other books first in Georgian, then Russian, and finally in English. After I read Corbett's books in English, I realised that the strict Soviet censor, like stripping Darwin's writings of all the ambiguities about the question of God, also stripped Corbett's writings of details considered improper for the atheistic audience of the communist country. One such example is the removal of the mention of strange happenings in the Champawat bungalow that Corbet could not explain, and which has been discussed earlier in this book. Interestingly, Corbett was especially glorified in Soviet translations for his principles of waiving all the governmental rewards for killing the man-eaters, which was the opposite of the way Corbett was presented by some North American booksellers to their readers as an expert-professional hunter who was killing the man-eaters following governmental requests (the image that Corbett explicitly hated)[39].

Totally fascinated by his writings, I once made all my colleagues and students sit patiently for several hours, while I read to them my favourite story, the "Thak Man-Eater" from *Man-Eaters of Kumaon*.

While living in the Soviet Union, where travel to other countries was virtually impossible (unless you were a member of Communist Party, which I have never been), I never dreamed I would ever visit any of the Corbett hunting places, described so vividly in his stories. Only after emigrating to Australia in 1995 and travelling in several countries did I realise that I was able to travel to

[39] Readers can refer to the letter from Corbett to Mrs. Virginia Carrick, his USA publisher, in *Behind Jim Corbett's Stories* (Logos 2020), page 226.

India, and possibly visit Kumaon villages. As social media opened so many new possibilities in the late 2000's, I gradually entered Corbett's world, contacted the "Jim Corbett Foundation" in Canada first, then, in January 2011, using the invitation to attend the International Educational Congress in Delhi, I visited Kumaon after the Congress. Not surprisingly, the very first thing I did was to go directly to Thak village, with the help of a local tourism operator who was familiar with some places which Corbett mentions in his books. I was burning to see the famous rock[40] where the dramatic meeting between the 63-year-old Corbett and his last man-eater took place on November 30, 1938 and read my favourite story on the spot there.

After fulfilling my dream, my Corbett-related plans and research projects snowballed. I was happy to find several other enthusiastic and passionate Corbett fans, and we joined forces for several subsequent travels to Kumaon in 2012, 2014, 2016, and 2018 (in 2018 twice). Fortunately for me, several members of our field group, like myself, had a taste, experience, and even official credentials for scholarly research. So, as a result of our on-field research, we published two volumes of the book *Behind Jim Corbett's Stories* (in 2016 and 2020). We gradually established the "Jim Corbett International Research Group" with an official Website and Facebook page in 2018, then founded the "Jim Corbett International Research Association" in Australia in 2019, and then, in 2021, instituted the "Jim Corbett International Research Centre" at Grigol Robakidze University in my native Georgia in Tbilisi. Now we have plans to publish a new book, provisionally entitled *Annotated Man-Eaters of Kumaon,* that will contain all the man-eater stories written by Cor-

[40] An account of how the author reached Thak and searched for the rock is given in a chapter in *Behind Jim Corbett's Stories* (Logos 2016), with photos of the rock as well.

bett, arranged in chronological order, and supported with extensive annotations, about the places and people mentioned, with possible explanations of some mysteries, rare and unseen photographs, letters, and other archival materials. In 2011, after finding the rock where Corbett finished his career as hunter of man-eating tigers, I even wrote a screenplay "The Last Hunt of Jim Corbett", with the overall attitude that probably Corbett wanted people to have for his man-eaters – a more sympathetic light, as a tragic deviation from the natural ways, often the result of human-made errors. In June 2023 we plan to organize an international conference "Defence Strategies in Early Human Evolution", the topic, discussed above as the sphere where the expertise of Darwin and Corbett find interesting intersection.

As you can see, my lifelong role models had and continue to have a profound importance on my life, and as I am becoming older, I feel their influence grows and matures together with my admiration for them.

So, my dear Reader, we reached the end of our book, dedicated to the lives of two brilliant self-educated naturalists. I have a feeling that every biography of a famous person, be they artist, politician, sportsman, or representative of any other sphere of human activity, is written ultimately not only to describe the environment that shaped the character of the hero, or the decisions made by the hero, but ultimately to give illuminating advice from the hero to the readers. Possibly this is the reason that some historical figures and their biographies that seemed rich and fascinating a few decades or centuries ago are gradually losing their appeal, and others, on the contrary, are gaining a wider appeal as time goes by. Both heroes of our book, it seems to me, are gaining a wider appeal, and this is happening primarily not because of their best-selling books and scholarly legacy, but for their disarming human qualities. Their

simple unassuming modesty, their frank and direct approach that was equally applied to everyone, from their unknown listeners and readers, to their critics or friends and family members.

Combining their unfailing human qualities with the magnitude of their talent as naturalists, as popular authors able to write on very serious matters in ways that could emotionally engage millions of readers; As passionate humanitarians, who created a lasting legacy that will likely to grow as more time passes from the mysterious date of April 19th, when both of them, Charles Darwin and Jim Corbett, stepped together from this world and are now probably having long conversations in Heaven, discussing many subjects that they had in common during their passionate lives, filled with love and compassion for the voiceless humans and animals that inhabit our precious green planet.

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JOSEPH JORDANIA is an Australian/Georgian award-winning ethnomusicologist and evolutionary musicologist at the University of Melbourne. He was born and educated in Georgia (former Soviet Union). His first meetings with Charles Darwin's and Jim Corbett's writings occurred in the heavily censored Soviet Union. Nevertheless, he fell in love with these remarkable men and self-educated naturalists. Jordania started traveling (including to Darwin- and Corbett-related places) only after he migrated to Australia in 1995.

In this double biography Jordania follows often neglected details of the biographies of his role models, tries to find elusive clues to their characters and the mysterious health problems apparent from their writings. As a result, this small book gives a unique glimpse in the multidimensional personalities of Charles Darwin and Jim Corbett, and attempts to combine their fields of expertise to better understand the process of human evolution and the role major predators played in forming our morphology and behaviour.

Joseph Jordania also authored the following books:

The Human Story behind Scientific Discovery. Tbilisi: Logos, 2020.

Behind Jim Corbett's Stories, Volumes 1 and 2 (written with Priyvrat Gadhvi, Preetum Gheerawo, Manfred Waltl, Ali Akhtar, and Fernando Quevedo). Tbilisi: Logos, 2016, 2020.

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