Bernhard Wessling

The Call of the Cranes

Expeditions into a Mysterious World

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For George, without whom this book wouldn't even be half as interesting;
for my grandchildren, whose inquiries prompted me to write it;
for my partner, she supports me so much.

Foreword

When a pair of Sandhill Cranes that nested in a small wetland near our home lost their 3-week-old juvenile to predators in the middle of the night, the parents called for the remainder of that night, and frequently throughout the next few days. They seemed to grieve. Those that work with captive cranes know the great variation in their personalities. The more one experiences cranes in the wild, the more fascinating they become. After all, these tallest of birds that fly have graced earth's landscapes for millions of years before humans appeared. Evolution has had plenty of time to perfect a remarkable product.

Dr. Bernhard Wessling, a nature lover and an accomplished chemist, became interested in cranes in 1981, when a pair of Eurasian Cranes established themselves in a nature preserve near Hamburg, Germany. He observed them frequently and recorded extensive notes about their behavior. In the following years, more pairs established breeding territories in the wetlands and meadows. Bernhard wanted to know more about them. To protect the cranes, a rule was created that humans were not allowed to leave footpaths. Because it was impossible to capture and color band the cranes, Bernhard recorded their calls and, through analysis of duets performed by pair members, he was able to identify every bird. Year after year, by recording the duets, he was able to peer into the lives of both individuals and pairs. This book reveals his remarkable discoveries, collected in the wild, about the behavior of these complicated creatures (Fig. 1).

At a conference about cranes in Germany in 1996, I was enthralled by Bernhard's findings, and suggested he use his techniques to learn more about the rarest of cranes, the Whooping Cranes in North America, and the Red-Crowned Cranes in the Orient—both close relatives of the abundant Eurasian Cranes. Whooping Cranes numbered in the low hundreds. Vocal

Fig. 1 Whooping and Sandhill Cranes resting at Platte River, Nebraska, during their migration to the South: It is very rare to see so many Whooping Cranes resting together during migration. Photo taken on Nov 6, 2021 (© Crane Trust by Colleen Childers)

identification avoided the risks associated with capturing cranes to band them. Dr. Wessling's recordings of wild Whooping Crane vocalizations have been used during the raising and flight training of captive-reared Whooping Cranes to communicate with them and have them follow ultralight aircrafts to learn their migration routes across the USA. Thus, he has made a significant contribution to the reintroduction of a migratory flock of Whooping Cranes east of the Mississippi River.

And I had a hunch that the non-migratory Red-Crowned Cranes in Japan were perhaps genetically distinct from their migratory cousins on mainland Asia. Perhaps their call might provide more evidence to answer an important question for conservation. Bernhard's adventures and findings in Texas, Japan, and South Korea (in the DMZ at the border to North Korea) are outstanding.

Beyond the many obvious questions that individual recognition answered, Bernhard's analytical mind ventures into the questions about the ability of cranes to reason and not simply to respond. That is where this book becomes unique and thought-provoking and brought me back to thinking about the wild Sandhills near my home.

One summer, I fed them corn every morning some distance from our house along the driveway that ran through the marsh. The cranes were standoffish and never came near us. One morning, I forgot to feed them. They walked to the house, climbed up the steps of the porch, stood beside the kitchen door, and called. As well as getting the message, I also realized that cranes not only respond, but they can also think!

Enjoy the read. And thank you, Bernhard, for your substantial contribution to our understanding of these remarkable birds that migrate across continents, dance, duet, lavish care on their young, and still survive, despite the ways in which we modern humans have impacted their ancient lives.

International Crane Foundation
Baraboo, WI, USA

George Archibald

Foreword

Sy Montgomery, naturalist and author of 31 books for both adults and children (including *The Soul of an Octopus: A Surprising Exploration into the Wonder of Consciousness*, which was featured on the *New York Times* best-seller list).

The Call of the Cranes is a mesmerizing, vivid, lyrical, and revelatory book. Full of beauty, suspense, and insight, it is not just about a beautiful and mysterious bird—though this alone makes these pages thrilling reading. But Bernhard Wessling brings us even more. He has spent many years conducting studies on the intelligence and behavior of four species of cranes in the wild, including a new method he developed to identify crane individuals and pairs in his study areas without disturbing them at all: from a distance, by analyzing their voice. This book is a testament to the joy and dedication that ignites when we deeply connect with individuals of other species, when we enter and inhabit their world. And it is also a call to arms, inspiring us to summon the courage we need to save the cranes—and all the other species threatened by us humans.

Syracuse University
Hancock, NH, USA

Sy Montgomery

Preface

It was a long way from the densely populated, ugly, and heavily polluted Ruhr region, where I grew up and studied, to the Duvenstedt Brook near Hamburg, where I saw cranes for the first time in my life. Even longer and more arduous was my expedition into the hidden, mysterious world of the cranes, their life, and their way of thinking.

I came into contact with the issues of environmental pollution and threats to nature at a very early age. As a child, I often noticed, when our family of eight's laundry was hanging outside in the garden, how a cloud of soot would rise from the chimneys of the nearby coking plant in Herne, settling in our backyard and leaving ugly black stains on the clean clothes. As a teenager, I loved the late autumn evenings, when the dense fog forced the then still small number of cars to proceed at a walking pace, while I drove my bike, to which I had attached powerful lamps so as to conjure up mighty cones of light within the fog, which was, in fact, smog.

In 1971, as a third-semester chemistry student, I responded to a blackboard notice seeking chemists to analyze illegally dumped barrels.[1] Most of these contained cyanide compounds, and, to a lesser extent, other substances, and some contained sulfuric acid. The barrels had been dumped into a specially dug hole, which had gradually filled with water. The sulfuric acid barrels rotted first, so that this "pond" was, by now, strongly acidic, a condition that, with the additional presence of the cyanide salts in the also slowly corroding barrels, had led to the release of hydrogen cyanide gas. Dead animals lay around the pond and floated on the water. It was a "doomsday" scenario. As a university student with no funds, I desperately needed money to make a

[1] cf. http://www.spiegel.de/spiegel/print/d-43144036.html

living. The difficult and dangerous job paid well. So, I found myself wearing full respiratory protective gear in sweltering heat during the semester break. Every day for weeks, often enveloped in highly toxic dust clouds, I spent 6–8 h analyzing rotting barrels to see if they contained cyanides ("to the left, to the big barrel mountain") or other less toxic waste salts ("to the right, to the other toxic waste").

The heat was suffocating. Threatening dust clouds passed over us from all directions. The full protective clothing and gas masks required were actually unbearable. This tempted some workers to work without breathing protection. One day, one of them was sitting in front of me on top of his excavator. He wanted me to examine the barrels he was excavating. When he moved his shovel, he accidentally caught a barrel of powder, the rotten barrel shattered, a dust cloud surrounded me and the excavator, and the excavator operator immediately collapsed dead before my eyes right there in the driver's seat. I frantically called for the paramedics, and the worker was rushed to the mobile emergency clinic installed on the site, injected with an antidote within seconds, which revived him, and he was additionally ventilated. The next day, he was back on the excavator, but now wearing a gas mask and full protective clothing. None of the workers refused to take the necessary protective measures from then on. The weeks-long student job shaped my attitude toward environmental protection and, later, nature conservation. A year later, in 1972, the first report of the Club of Rome, "The Limits of Growth," appeared and was hotly debated among us chemistry students. It became increasingly clear to me: We needed to treat this planet and its ecosystems with much more respect. As a chemist, I wanted to make my contribution to this through research.

By the age of about 14, I had already become intensely involved in natural sciences, including astronomy. When I looked into space through my telescope for which I had painstakingly saved up, I felt not only insatiable curiosity and boundless awe, but also a deep-seated fear of the infinity of the universe. I was then struck by severe depression: We are alone on our earth, floating in hostile space—that is how I felt, and it caused me to feel lonely. The situation was only exacerbated by the fact that I had little support within my own family, and thus I became something of a loner.

One day, as I was once again wandering aimlessly through a small forest in Herne, I found a tiny, bluish shimmering feather. I learned that it was a jay feather and put it in a small box. On further rambles, I collected more and more feathers, even including one from an eagle! I attached them to a white piece of cardboard that I hung on the wall in my basement room; I discovered that I enjoyed studying bird feathers and spending time in nature, and, in this

way, I found my way out of my fears and my deep depression. Forests and fields had become places of retreat for me, where I could relax and reflect on myself and the world. Nature—which includes those landscapes that are shaped by humans as well as the wild, rugged, hard-to-reach, and lonely areas—has since then been a regular source of relaxation and relief from professional and personal stress for me. (To determine this effect today has required elaborate research, but at least the latest studies from the USA and Japan confirm my personal experience over the past five-plus decades.)

As a young family man, I brought my children into contact with nature from the beginning. In particular, we watched birds and discovered the cranes for ourselves. Together with my growing sons, I came to understand these birds' vulnerability and how difficult it is to protect or restore their habitat, and that nature and species conservation must always go hand in hand with environmental protection. I decided to join the crane conservation program, which I would soon come to lead for about 5 years.

During my intensive observation of the cranes, I discovered that shockingly little was known about the life and behavior of these impressive birds. With their enigmatic nature, they aroused my scientifically trained curiosity and inspired me to research outside of my real profession.

There is unlikely to be another place in the world where free and wild cranes live and breed in such close proximity to humans as the Duvenstedt Brook and the Hansdorf Brook. Both are located on the northern edge of Hamburg, a city of over a million inhabitants, tens of thousands of whom visit the nature reserve every year to hike, relax, and observe nature. (Unfortunately, a not negligible minority of the visitors disturbed the nature reserve with their picnics, Easter egg hunts, and venturing off the paths to take pictures, activities that are sometimes accompanied by poaching and egg theft. This situation has since improved greatly, due to our persistent work.)

Perhaps nowhere else were crane watchers as intensely connected to "their" cranes as we were. The task of the "crane guards," as we called ourselves and were called by the visitors, was to prevent disturbances. So, we did not actually "guard" the cranes, but rather the visitors, at least those who would consciously or unconsciously become troublemakers.

During the breeding season, there were usually two crane guards in the Brook all day every day for one week. Many of us even spent the night there. We got up at the crack of dawn and did not go to sleep until after the "woodcock dash" (this is the name given to the behavior of woodcocks that "dash" at dusk along the edge of the forest or across the meadows in their territory).

From mid-February to mid-November, the cranes are "with us." Until the late 1990s, there were four to six breeding pairs of cranes and a few

"bachelors" hanging around our area each year. In the early 2000s up to around 2016, about a dozen crane pairs each occupied a territory. In 2019, in addition to the dozen territorial pairs and other pairs seeking territories, at times, more than 20 juvenile cranes, some as a large group, were in the Brook. One day in May of that year, I saw 65 cranes in a meadow in the core of the Brook, while in May 2020, there were more than 100 (which was not at all the case in 2021). By the way, the territories, in the narrower sense, are no larger than about half a square kilometer, and in some places, they are easy to look into (although most parts are not observable, to the advantage of the cranes). However, the territorial pairs defend a much larger area against other cranes, so the territories include a core zone with a breeding site and a feeding area, as well as a buffer zone.

So, for years—perhaps uniquely in the world—I was able to observe many cranes under open-air conditions just a few minutes away from my home and my workplace. In the spirit of our protection mission, we observed the animals from afar, from outside the flight distance, so that the observation itself did not have any disturbing effect.

I did not conduct behavioral experiments with cranes, but only observed them. However, this does not mean that I can observe and describe "cranes unaffected by humans." Humans restrict the breeding and feeding areas and the mobility of the animals through hiking paths, roads, or agricultural areas. The latter have adapted their behavior, and so one always also observes the birds' reactions to human influences. The behavior of animals in a cultivated landscape like the Brook is certainly not the same as in the wild, in places such as the largely undisturbed Siberian tundra, the mid-Swedish forest, or the Finnish lake landscape, although, in the meantime, some smaller areas in our nature reserve have been left to their natural development again.

It was precisely this circumstance that made the observations particularly appealing: How do cranes deal with situations that are unfamiliar to them? How do they behave when other animals, but especially humans, disturb their breeding or feeding? Those who, like me, have enjoyed observing nature from a young age, no matter in what field, will sooner or later come across strange events. I noticed that "my" cranes behaved differently than I had expected after brushing up on my knowledge of behavioral science and reading contemporary articles and books on cranes. In contrast to what I read and heard, they did not behave stereotypically, not as one would expect according to an inherited behavioral pattern, but like actual personalities, with their own plans and individual traits.

This did not come as a complete surprise to me. Again and again, I had thought about how "thinking" actually goes on, what the material basis of

memory is, and how consciousness arises. In this process, I occasionally wondered whether animals' thought processes are really so very different from our own, and it would seem perfectly normal to me if, one day, it were discovered that animals think in a fundamentally similar way to humans, merely—depending on the species—gradually differing from us and from each other. So, I am always eager to read articles or books that report research results on the thinking, intelligence, and consciousness of animals.

I had not expected that I, as a voluntary conservationist, would ever be in a position to contribute my own systematic observations on this subject. But more and more, my observations had turned into real and systematic scientific research. As a nature scientist by education, as a chemist who started during the PhD laboratory work with deep research, and as the one who continued to even perform fundamental research in combination with applied product development in the mid-size chemical company that I ran as CEO and major shareholder, I entered more and more into behavioral research. Still I did not expect that anyone would ever be interested in what I observed and concluded. But when I presented some particularly remarkable observations from my first years on the occasion of the European Crane Conference 1996 in Stralsund, one of the attendees, George Archibald, was listening, the founder of the International Crane Foundation (ICF), famous among crane experts and conservationists all over the world. He motivated me to deepen my studies and, additionally, to pursue them internationally, with crane species beyond the Common Crane (also called the "Eurasian Crane") native to our country and most of Europe in general, but also to parts of Asia. Thus, over time, I actively participated in numerous international projects, conducted crane research parallel both to my main job as a chemical researcher and to what I did as an entrepreneur for the development of my company, and published the results of my work at conferences and in specialist publications.

Since mid-May 2018, my life partner and I can hear crane calls when we wake up in the morning or sometime during the day. When I sit at my desk in my study under the roof, I look out across the landscape during thoughtful pauses. We now live in the immediate vicinity of the Hansdorf Brook on the outskirts of Hamburg. Time and again, cranes fly by at a distance of only 50 or 150 m. Even more often, I hear them calling. Shortly after we moved into the house on the edge of the Brook, I told my then nine-year-old grandson the story of "Romeo and Juliet," the crane pair that readers of this book will get to know better later. Their last nesting site is only about 300 m from our house as the crow flies. It was at that moment that I began thinking about writing this book. It was about the same time when George visited me in my

new house and reminded me of his wish from a long time ago that I should write this book. I was lucky that I had written lots of diary entries and had even drafted many raw text chapters during the years with the cranes, and also lots of systematic notes and tables (just as nature scientists do it)—otherwise I would not have been able to write the book as you can now read it. It appeared in March 2020 in German, on the very day when Germany commenced its first lockdown due to the Corona pandemic. This English edition is slightly revised and partially updated where necessary.

Here, I recreate my years-long expeditions into the enigmatic world of the cranes. I describe experiences and observations that have allowed me to solve some of the mysteries that these beautiful birds have presented to us humans for millennia. These mysteries, in turn, lead us to questions about ourselves and our consciousness: How rationally, how consciously do we humans act, and how different is this from the actions and thoughts of animals, specifically, in this instance, cranes?

After realizing that these birds are different from what has been described in the textbooks so far, it is not a long path to the conclusion that we need to think much more broadly about conservation and that we need to act more holistically—based on a deep respect for nature.

Jersbek, Germany Bernhard Wessling

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I am grateful to so many people for their help in the making of this book. First, George Archibald, without whose encouragement I would have continued to watch cranes only in the Brook. He lured me into the much bigger international projects. My sons, who accompanied me on many of my early observations, especially my older son, with whom I spent a number of joint crane-watching weeks. My life partner, who read several versions of the manuscript for the German edition, gave me numerous critical suggestions, and also had endless patience with me during the final phase of constantly editing the manuscript until it was finally approved. (I am especially grateful that she has since come to share my passion for cranes and nature.) And then, she developed even more patience during the subsequent phase, when I worked with the editor at Springer Nature and their lector for this English edition. I thank the publisher Goldmann and the editorial office for seeing my book project as a suitable offering to a readership interested in nature, and for their many valuable comments and suggestions. In addition, more thanks go to Goldmann for allowing Springer Nature to publish the book in English, as well as, to be sure, to Springer Nature and its editors for accepting my proposal to publish this edition, which would have not have been in true English if Marc Beschler had not reviewed the various versions that I sent with ever ongoing changes. I would like to thank the photographers Carsten Linde, Kunikazu Momose, Colleen Childers, Ted Thousand, Tom Lynn, Larry Mattney, and Mike Endres, the crane conservation organizations ICF (International Crane Foundation) and Red-Crowned Crane Conservancy Hokkaido, as well as the chief pilot of Operation Migration, Joe Duff, for providing me with photos that complement my own and also with additional information and suggestions. Also, I am very grateful to Jennifer Ackerman

and Sy Montgomery: for your inspiring communication and your support for my book. Even more thanks have to go to you, George, for your Foreword and your various detailed suggestions after you read a preliminary version of this English edition, as well as for the initiative you showed in sending me here and there and your motivating support! (Fig. 2)

Fig. 2 I am waiting for the cranes to call (© Bernhard Wessling)

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How It All Began

Strange trumpeting calls rang out from somewhere in the bog directly in front of us. We had never heard anything like this before, and had no idea what it could be, but we were burning with interest. Their creators—they must be birds, but what kind?—were not, however, visible, because they were hidden behind bushes, trees and reeds. My then-wife and I, together with our two still very small sons, were exploring our new environment in that spring of 1982, because we had moved to Bargteheide only a few months earlier. The nature reserve "Duvenstedt Brook" was not far from our new home north of Hamburg, and we had already visited it a few times in winter, but this day marked the first time we were doing so in spring (Fig. 1).

We soon found out that these clear and powerful, far-carrying calls came from cranes, the first pair to establish a territory in Duvenstedt Brook in living memory, having settled there a year earlier. With their necks stretched high and their beaks erect, they trumpeted "oooo—i, i, i" several times in unison, over and over again—fascinating.[1] It was breathtakingly beautiful to watch the cranes during our increasingly numerous visits to the Brook: They danced around each other, swinging their wings, jumping up elegantly and springily, landing with the grace of ballet dancers and letting out short sounds as they danced.[2] Sometimes, they ended a dance with a unison call. Even when they were just walking across the meadows or through the bush, they did so calmly,

[1] cf. https://www.bernhard-wessling.com/Duettruf Rufaufnahmen: http://bit.ly/2Wem64C or http://bit.ly/2petlNJ (an overview of all the calls mentioned in the following notes with links can be found here: https://www.bernhard-wessling.com/Rufaufnahmen).

[2] Dance in winter time: cf. https://www.bernhard-wessling.com/wintertanz video: https://www.youtube.com/watch?v=qnOo2mB90-Y

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Fig. 1 Wetland area in Duvenstedt Brook (© Bernhard Wessling)

Fig. 2 Common Cranes dancing (© Carsten Linde)

self-confidently, quietly searching for food here and there. But they could also gracefully walk around each other, looking at each other, or walk side by side with their heads up, presenting themselves to each other, either in preparation for a dance or instead of dancing. Simply beautiful (Fig. 2).

We were by far not the only ones who were captivated by these images. And almost every person who has seen migrating cranes in autumn or spring, who

could hear their flight calls—over Frankfurt, over the Bergisches Land or Kassel—notices and calls out: "Look, there are the cranes migrating again!" Meanwhile, more and more people are traveling to the Vorpommersche Boddenlandschaft in autumn to experience a magnificent natural phenomenon: Tens of thousands of cranes from Sweden, Finland, Estonia, Latvia, Poland and Ukraine rest here for a few days or weeks, flying early in the morning from their roosts in the shore zones of the Bodden to the surrounding fields and meadows to look for food. In the late afternoon or early evening, the flocks return, flying, accompanied by the rustle of their wings and their loud conversation, back to the huge reed beds to roost.

I was not able to experience all of this in my youth in the Ruhr region, nor as a young man after my doctorate, when I first worked in Duesseldorf, because there were no cranes. They did not fly over the Ruhr or the Rhineland, and the Bodden landscape would not have been accessible to me, even if I had known about it, because it was still in the territory of the GDR at that time.

An important step on my way to the cranes was a decision my then-wife and I made when our first son Bengt was born in 1978. We wanted to know more about nature. From the beginning, when we went for walks and hikes with our children, we didn't want to say "bird" (let alone "peep" or "tweety"), but rather "blackbird", "great tit" or "kestrel" whenever we would discover something and show it to the children. So, we bought a bird identification book and studied it.

Equally decisive was the fact that I took a new job in 1981 that required us to move from Duesseldorf to Bargteheide, a small town northeast of Hamburg. In the meantime, our second son Børge had been born, and we walked with the children, the youngest in his carriage and the older on our shoulders, to the nearby nature reserve, the Duvenstedt Brook, almost every weekend. I wanted to instill a love of nature and natural science in our children from the very beginning by observing and experiencing them together.

Shortly after we had heard and then observed the first cranes, we got to know some of the crane conservationists. The German Federation for the Protection of Birds (DBV, today: Naturschutzbund Deutschland, NABU) and the World Wide Fund for Nature (WWF) had initiated crane protection in Hamburg in 1982. Paths were closed, and visitors were informed and persuaded to be considerate in order that the brood would not be disturbed, not by humans at any rate. The concept gained greater success step by step.

At that time, I could not have guessed that, a few years later, I myself would be in charge of the conservation program. My predecessor introduced me to the subtleties of crane observation from the mid-1980s onwards, and ultimately handed this project over to me when he turned his attention to the

cranes in eastern Germany and moved to Mecklenburg. I had already gained a lot of experience by that time, and had gotten to know the area and the cranes that were breeding there very well.

I was granted a unique opportunity to ponder crane behaviour in 1994, because of a pair that was breeding very close to a hiking trail. There was a nice waterhole, which had probably formerly been a pond for fish-breeding, but had now become marshy. Around it, bushes and trees provided nice camouflage. And the year before, this pair had settled there, laid eggs and incubated—until they were stolen by an egg thief. A shock for us! How could this nesting site, so well hidden, so difficult to see and almost inaccessible, have been discovered and robbed?

In Germany (and certainly in other countries as well), there are always illegal removals of crane eggs from clutches. During my time as the person responsible for crane protection, we counted three such cases—despite crane surveillance. The terrain is confusing, and at night, dawn and dusk, it is easy to hide.

In 1997, a bird breeder (who ran his business with state permission) was charged at Kiel District Court with, among other things, running his breeding operation with illegally procured eggs. He kept 60 cranes, including three foreign species. He had attracted attention by virtue of the fact that his crane breeding results were significantly better than those of the Walsrode Bird Park. A genetic analysis proved that the "offspring" were not related to their "parents", which led the prosecuors to conclude that he had obtained the eggs from wild clutches. During the investigation, a smuggling ring was busted in Mecklenburg that was stealing eggs from crane clutches and shipping them out, mostly to the Benelux countries. During one of these transports, more than 40 eggs were seized. The Schleswig-Holstein breeder was also found in the address file of the smuggling ring. Unfortunately, all of this did not convince the judge, who kept asking whether a witness had been present during the egg theft or when the eggs were handed over to the defendant, which, of course, was not the case. So, the breeder was not convicted, at least not for the eggs. Without question, however, there are breeding farms in Germany and Benelux, legal and possibly illegal ones, which breed and sell cranes from wild clutches.

There are also non-commercial motives for stealing eggs from the clutches of wild birds. In 1999, a ring of egg collectors was busted whose members exchanged eggs like other people swap postage stamps. What these people had gathered in eggs brings tears to the eyes of conservationists. Over 100,000 blown-out eggs were recovered, including numerous crane eggs, even some

eggs of the Siberian Crane, of which there were, at that time, just twelve individuals left in the western population, and only one today.

A number of quite respectable people were arrested (not, as in the case of the trade in eggs to be incubated, some unemployed and homeless people from Mecklenburg who were hired by breeders). The hobby of collecting, blowing out and exchanging eggs of all bird species of the world was pursued by respectable customs officials, business clerks and geography teachers. The busted secret ring turned out to be only the tip of the iceberg (or tip of the egg mountain, if you prefer).

Back to the careless crane pair. In 1993, all attempts to safeguard its nest were unsuccessful. And a year later, the pair bred again in the same place. We discussed how to strengthen our guard duty, looking for places from which we could overlook the breeding area without being seen by visitors. Of course, there could be no real security. The thief (if he wanted more eggs) could have chosen times for further raids. Would it be better if we took the eggs ourselves, thus scaring the pair off and hopefully persuading it to re-breed in a more suitable place?

I was strictly against such an approach. The cranes had settled in this area and had to get along with the humans willy-nilly. If they couldn't manage here—under our guard—we couldn't help either. It could not be our job to constantly intervene when a clutch of eggs was inconveniently laid or endangered. So, we let the cranes breed. At least this time, the egg thieves should have a harder time, we swore, and we watched the surroundings of this nesting place very intensively. I and my older son Bengt, who was 16 years old at the time and with whom I once again spent an entire week on crane guard duty, checked the access points to the immediate vicinity of the nesting site every day at dawn and dusk.

Because of the nearby big city, one has a good view when the skies are cloudy above the Brook, even at night. Only a cloudless night with a new moon is reasonably dark, and on such a night, my son and I were once again guarding the crane's nest's vicinity at that time.

It was already late, and we actually wanted to leave. We were freezing, and it had become quiet. Bengt had come over to me from where he was standing. We stood in the dark, listening. The first thing we caught was not a sound, but a shadowy movement across the open field at the edge of the Brook, just inside the nature reserve. "Someone's there!" We crept forward and out of the cover of the site, so that we could see the person as he emerged from the next dip—if it was a person. Perhaps it would turn out to be merely a big dog, and the excitement would be all for nothing!

No, it was not a big dog, it was a figure completely dressed in black, who had even masked his face. We thought feverishly: What do we do? Wait until he goes to the nest? No, we might not recognize him in the undergrowth or even lose him. Besides, we didn't want to risk disturbing the nest. Even if this hooded man wasn't an egg thief, it was still within our purview to approach him, because leaving the trails is forbidden in this area, including at night.

So, we decided to run towards the person—Bengt on the outside, me on the inside—to cut him off. At this point, the masked man saw us, disappeared into the bend, did something that, as best as we could see in the dim light, looked like he was ditching a backpack, and proceeded hurriedly along the path. "Stop, what are you doing here?", I called to him. From what I could now see, he was a boy of about 15. He claimed to be playing his own cross-country game, but did acknowledge that he was off the trail in violation of the law. He denied any knowledge of a backpack, claiming not to have had one. Unfortunately, we couldn't find anything later in the darkness.

I stayed with the boy while Bengt ran to the nearest phone booth—mobile phones didn't exist yet—to summon the police. But they didn't come, so we finally called the official ranger. He was visibly uncomfortable; our perception was that he must have known the boy. The whole event ended like the Hornberger shoot-out: much ado about nothing. Whether the boy really wanted to steal eggs or whatever else was behind his behavior, we never found out. In any case, the eggs were not stolen that year.

But this did not relieve me of my concern for this crane pair, because cranes need three conditions for successful breeding: firstly, a constantly damp place with water about knee-deep. Secondly, absolute undisturbedness, because they leave the nest and/or the chick at any disturbance, making it an easy game for all kinds of predators, whether it be ravens or wild boars or foxes or martens. Without disturbance from humans, cranes do quite well with these predatory foragers. Third, cranes need an open meadow or clearing in a forest near the nest where they can walk and feed the chick after hatching[3] until they are fledged (which takes about 3 months). In the case of this crane pair, things did not look good in this last regard. Water was available. We made sure they were undisturbed as best we could. But where was the meadow or the clearing? Behind the breeding place (however about 2 meters higher, because the marshy pond with the nest lay below at a steep slope), there was a former pasture, but it was much too small and much too close to the main road, with people meandering along on sunny Sundays by the hundreds. No normal

[3] cf. https://www.bernhard-wessling.com/am-nest

Fig. 3 Crane pair on their nest in the pond, one chick has hatched (© Bernhard Wessling)

crane would endure this. On the other side, there was a dense forest with thick underbrush.

The day of hatching had come. I had found a spot from which, with good binoculars or telescopes, we could see almost directly into the nest without being seen ourselves. Never before or after did we have the opportunity to observe chicks at such an early stage. How small these two were, snugly wrapped in their golden brown "fur" and already quite alert! (Fig. 3).

Normally, crane parents leave the nest area with their chicks after a few days and walk to the meadow to feed them. The excursions become longer and longer day by day. At night, they either go back to the nesting site or look for another place (again, in about knee-deep water) to spend the night. When sleeping, they stand in the water, while the chicks sit in the nest. But these cranes hardly moved from their spot. They stayed in their little marsh, often less than 20 or 30 meters from the nest, or hid in the adjacent brush. All of this did not make a good impression on me, and I didn't have the slightest idea how the cranes would manage to raise (and fledge!) their offspring. Then, they grew up, and I came to realize that the place was very well chosen as a food source. It offered little exercise, but plenty of protein-rich food: The adult birds were able to catch many flying insects and feed them to their chicks.

Only, how was the rearing to continue when the juveniles left the confined nesting area? How were the parents going to show them what was good and