# Rediscovering Tanner's woodpecker; reflections on the survival of the ivory bill

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Our conceptions of nature and our relation with it are to no small degree colored by the great romantic success stories of nature conservation. Among these, stories of rare birds seem to strike a special chord. The rarer a bird is, it seems, the stronger is its effect. Thus, the tales of the Californian Condor and the Whooping Crane catch our imagination even more than those of the Bald Eagle or the Carolina Duck, even though the latter were saved much more succesfully than the former. Somehow, we like the idea of birds, large, strikingly beautiful, that seemingly belong to another era of vast, unspoilt wildernesses that are lost forever.

While we like to hear success stories, the great failures of nature conservation are less gladly remembered, but still strongly present in our common memory. Of these, none seems to have a greater impact than the saga of the Ivory Billed Woodpecker. Here was a bird, large, strikingly beautiful, barely clinging to life in the last suitable tract of old-growth riverine forest in the Southern States. Already considered extinct by many, it was rediscovered, filmed, and studied by James Tanner, only to disappear again when economic interests triumphed over conservation efforts. While the Singer Tract is gone forever, it is becoming increasingly clear that, sixty years on, the ivory bill is still with us. Leaving ornithologists, indoctrinated for so long by Tanner's paradigms, struggling to cope with the new situation.

Three questions, so obvious that few speak them out loud, immediately come to our mind. Why did the ivory bill survive, when it was supposed to disappear with the Singer Tract? Why did nobody find the bird in the past sixty years? And, why do we up to today not have hard evidence of its existence? As we will see, these questions are strongly influenced by the

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picture Tanner painted for us. Up to some degree, they are all ill-posed, which makes them hard to answer.

First, one has to realize why Tanner's monograph of the species plays such a central role in our knowledge of this bird. Although the ivory bill drew great interest even in times when it was still widely to be found, it was not much studied except from its collected skins. Therefore, Tanner's book [12] comprised not only the last, but also the first serious study of the species. As such, its influence was bound to be unproportionally large. We can say that when Tanner published his Phd thesis in 1942, the ivory bill became Tanner's woodpecker. Tanner himself contributed actively to cementing his picture of the bird; in the late sixties, when John Dennis found ivory bills in the Big Thicket area in Texas, Tanner described the biotope as "totally unsuitable" for the species, and even went as far as to say that "John Dennis wants to believe he saw something" [8].

Coming back to our questions, although he was not able to find them, Tanner never claimed there were no ivory bills outside the Singer Tract. In fact, in 1942 he concluded there were two more localities (both in Florida) that offered hope for the species, with some more birds present elsewhere [13]. So why did people come to believe the Singer Tract was crucial to the survival of the species? First, in spite of continuing rumours, it seemed that 'findable' ivory bills disappeared with the Singer Tract. Second, the nature of the place suggested a plausible explanation for the ivory bill's demise. Before it was logged, the Singer Tract held the largest stand of truly unspoilt old-growth swamp forest in the Southern States. Assuming that ivory bills would settle for nothing less than the most pristine wilderness, no other area at the time held enough suitable habitat for more than a few breeding pairs. Biological theory (for example, island theory or Caughley's small population paradigm [2]) tells us that a population that is subdivided into subpopulations that fall below a certain critical size is inevitably headed for extinction. While certain subpopulations may flourish for a while, they in the end all succumb to inbreeding and random fluctuations. Observations after 1944 seemed to confirm that this was exactly what was happening to the ivory bill.

Although it is often claimed there have been no "confirmed sightings" of the ivory billed woodpecker for sixty years, the fact is that many people have found ivory bills in this period. While ornithologists often treated these reports with great skeptisism because of the percieved lack of hard evidence, a considerable part of the community considered them to be reliable. For example, in 1978 Tim Halliday in his book Vanishing Birds wrote that "In 1968 the known population was just six breeding birds." Up to the early

seventies, observations by experienced birdwatchers seemed to confirm the picture of small, isolated subpopulations that died out one after the other. In 1950, ivory bills were found at the Chipola River in Florida. Steps to establish a reserve were abandoned after the birds were not found again in 1952 [9]. In the late sixties, John Dennis found ivory bills in the Big Thicket area in Texas. A reserve was founded, but the birds were not seen again. After the early seventies, practically all reports came from ornithologically untrained members of the public, and the species was widely believed extinct.

While this picture of the decline of the ivory bill is plausible and self-consistent, we should realize how much it is influenced by Tanner's observations. The Singer Tract was an island of old-growth forest, hence the ivory bill had to be an island species. Ever since 1944, people have been looking for a new Singer Tract, a forgotten island of old-fashioned wilderness where the species could survive. When the recent rediscovery started in 1999 with the incredibly detailed observation of David Kulivan in the Pearl River area, experts were discussing whether the Pearl could be such a place. After evidence of at least one ivory bill was collected at the Cache River, immediate steps were taken to protect this conceived last stronghold of the species. Even though, by then, it should have been clear there is not one such place. In recent years, observations have been made public from two locations in Arkansas, from the Pearl River on the border between Mississippi and Louisiana, and from Florida. Other localities are being rumoured, while still others may be kept secret, in part because everybody who finds ivory bills seems to believe to have found that last unspoilt wilderness that must be protected from all negative influences.

There are other reasons for secrecy as well. Since the extreme secrecy surrounding this species has seriously hampered our knowledge of it for sixty years now, it is necessary to discuss this. In the first decades after the failure to save the Singer Tract, people may have felt publicity doesn't help. Also, observers may still be afraid that publicity could draw crowds of birdwatchers (although this is hard to imagine in the wet, hot, and extremely man-unfriendly biotope of the ivory bill), with negative impact on the birds.

Yet another reason for keeping observations secret, that may play a bigger role than most are willing to admit, is fear of negative reactions and ridicule. Ornithologists of name like John Dennis have seen their reputation tarnished by the fact that they reported ivory bills. Reports of non-experts have been treated even more disrespectful. For example, when, in the early eighties, a Mrs. Van Kirkvoorde wrote that "[The book] stated that any record of one is noteworthy and should be reported at once. I sighted one

several months ago.", the only effect was that a renowned ornithologist repeated these lines after her for a good laugh [10]. It has been argued that what was special about Kulivan's 1999 sighting was not the detail of his observations, but the fact that someone believed him. Anyone who goes public with his or her observations, without hard evidence, must brace for a considerable volume of negative reactions.

This continues up to today. Even the team of Cornell University, who produced pretty hard evidence, have been criticised for publishing their results prematurely. An additional reason for this is that ornithology is not just science; it is also a sport. Thousands of people spend their free time hunting birds with modern optical equipment, boasting about rare stragglers they have spotted. In this athmosphere, the Rarity Commision is the referee, and getting an accepted sighting of an Ivory Billed Woodpecker is like winning the Super Bowl. Cornell University has won this Main Prize of North American Birdwatching, but some people, regardless of whether they believe ivory bills are extinct or not, contest whether they have really deserved it.

The result of all this has been a climate in which sightings of ivory bills were much less welcome than everybody pretended them to be. To a somewhat lesser degree, the same did apply to sightings of Carolina Parakeets in the thirties [11], and continues to apply to sightings of possibly extinct species like the Eskimo Curlew or Bachman's Warbler. The ornithological community has to come to terms with the fact that it is responsible for effectively surpressing information about ivory bills for many years. As Geoffrey Hill, who found ivory bills in the Florida panhandle ironically put it "The mistake was ever looking for them" [6].

This brings us to question of hard evidence. While well-documented observations by several well-trained ornithologists are generally accepted as proof, in case of the ivory bill, the standards are set much higher. Searches in Texas and Florida around 1970 produced feathers [9], that could with high probability be identified as belonging to Ivory Billed Woodpeckers. In addititon, in the same period, two photographs were published, reportedly taken in Louisiana by a person wishing to keep his name secret, that obviously either show an Ivory Billed Woodpecker, or are plane falsifications [9]. Needless to say, many experts at the time believed in the latter option, although there is little in the pictures that hints at foul play. In recent time, David Luneau has shot a blurry video at Cache River [5], while Mike Collins has shot an equally blurry video at Pearl River [3]. A careful analysis makes clear that both videos show Ivory Billed Woodpeckers. Although each piece of evidence is open to discussion, one should realize that when we think of

hard evidence, the picture we have in mind are the photographs and pieces of film shot by Tanner's colleague Kellogg in the thirties. So the real question is: why did no one shoot another Kellogg movie?

The difficulties involved with obtaining good photographs of wild animals should not be underestimated. Nevertheless, with many people trying and good equipment widely available, it is surprising that no good images of ivory bills have emerged yet. Tanner, and his supervisor Allen, studied birds at their nest hole. There is also a nest rumoured to be involved in the Lousiana pictures, while the feathers collected in Texas and Florida were from nest holes after the breeding season. Fact is that in the last sixty years, occupied nest holes were either not found, or not photographed, or kept secret. Taking pictures of birds foraging in the forest is obviously difficult, as the swampy forests it inhabits offer almost nowhere a wide view, and make it very difficult for people (as opposed to birds!) to move. In addition, ivory bills are rare, and presumably move around a great deal, making them hard to locate. Their sounds are not too striking, nor particularly far-reaching for a bird of their size. For comparison, the similarly sized European Black woodpecker has distinguished calls, that can be heard from a mile away.

To make things even more difficult, there are consistent recent reports that ivory bills are extremely shy. Several people have reported hearing ivory bills nearby, even after attracting them by playing tape recordings, without ever seeing them. Attempts to approach birds have invariable failed. This is all the more odd, since older reports suggest that birds studied at the time were much easier to approach. In April 1944, Don Eckelberry went to the then cut-over Singer Tract to look for one female ivory-bill that had previously been located by Richard Pough. History tells us that "He found her at her roost hole and spent two weeks watching and sketching her." One reason why this often cited as the last universally accepted sighting is that never since has locating an ivory bill sounded so easy. For comparison, in the winter 2005-2006, a 30 person strong search team from Cornell University, helped by over a 100 volunteers, with modern equipment, failed to locate a roost hole of an ivory bill that had previously been seen at Cache River.

As many large North American birds (including the Pileated Woodpecker) are very tame, one may speculate about the origins of the ivory bill's shyness. Sure enough, intense hunting in the nineteenth and early twentieth century must have put a large pressure on the bird. Whether shyness can develop in a species in such a short period is not clear. Perhaps the fact that native Americans hunted the species for its bill also played a role. It should be noted that outside North America, woodpeckers are capable of being very shy. The European Black woodpecker will never allow one to

walk up to it in the same way as the closely related Pileated Woodpecker does, while the Green Woodpecker (also from Europe) is renowned for its extreme shyness. Sometimes, one finds groups of individuals of one species that are less shy than others. Nowadays, this happens mostly when individuals in intensively visited areas learn to give up their "natural" shyness. In the Ivory Billed Woodpecker, the development may have gone in the other direction. Of course, at a time when more birds were present, the least shy ones were most likely to be found.

Summarizing, we have seen that it is not true that Ivory Billed Woodpeckers have not been found for sixty years, nor that no evidence of their existence has been collected. Moreover, that the search for this species has been considerably hampered, and continues to be so, by unfounded extrapolation of our information about Tanner's birds, as well as our romantic imaginations of what the bird should be like. While it is surprising that no better evidence of its existence has been collected, there are several factors that make this more plausible, including an unfortunate social pressure among ornithologists, continuing for many years, not to look for the bird in the first place.

There is one question that still needs to be discussed, namely, why did the ivory bill survive at all? Obviously, the theory of small isolated subpopulations did not apply. It has been suggested by Walters and Crist [14] that small population theory may be false, or needs modifications. It seems much more likely that the basic assumptions did not apply to the ivory bill, i.e., either the subpopulations are not small, or they are not isolated. The first option seems unlikely, since the bird would need to possess almost supernatural powers if more than, say, 25 birds were to hide in the White River and Cache River areas together, or in the Choctawhatchee River area or in the Pearl River area. Also, while these areas appear suitable for the species now, many of them were probably in a much worse state in the late thirties. The Pearl River area, in particular, had been a center of logging for almost a century when Tanner visited it during his searches. In view of this, he may have been right to dismiss it just in half a day, as he is reported to have done.

The conclusion that seems to force itself upon us, is that at least some of the subpopulations of ivory bills existing today are connected, and, in fact, some of these subpopulations have been founded during the last sixty years, without anyone noticing. At first, this may seem surprising, since species bound to old-growth forest are usually highly sedentary, as opposed to species of dynamic environments like reedbeds. On second thought, there is a lot of circumstancial evidence that speaks for the ivory bill being a

highly mobile species. Its wings and flight style seem appropriate for long, sustained flight. Its main food, insect larvae in recently dead trees, can be found for a limited time in great abundance where insect plagues, droughts, floods, or hurricanes have killed large areas of old forest. It seems likely that even under natural circumstances, ivory bills may have lived a semi-nomadic life, staying for one or a few years at places that were suitable, then moving on when food became scarcer. If this theory is correct, this also puts into new light the fact that ivory bills have often seemed to disappear from places where they had been found before. Most recently, the Cornell team, with enourmous effort, has established the fact that almost certainly last winter no ivory bills were present in the area where they had been observed in the previous two years.

Consistent with a presumed mobile life style is also the fact that Ivory Billed Woodpeckers apparently do not establish territories. Although Tanner described the species as holding a large territory, there is no evidence that it actually defends the large area it needs for foraging against intruders. On the contrary, its "kent" call and double knock seem to be relatively soft contact sounds, compared, for example, to the far-reaching sounds of the European Black woodpecker. According to Blume [1], even the latter defends only certain key areas in its large home range. In view of the even larger range needed by the ivory bill, and the fluctuating resources in it, it seems likely that it does not pay off for ivory bills to actively defend their home ranges.

If we assume, for the moment, that the ivory bill is the mobile species it appears to be, and that this mobility has been the key to its survival by connecting small subpopulations, then this mobility has profound consequences for possible protection measures. It would have been so nice, and easy, to preserve the Singer Tract for future generations, and not to care about what happens anywhere else. If, however, the present survival of the ivory bill depends on its ability to migrate between areas of suitable habitat, this may imply the necessity to preserve corridors, and, in general, to keep the countryside between one reserve and another in a state where ivory bills can move through. This may unpleasantly interfere with a free development of human activities. On the positive side of it, it may help keep the countryside in a state where many creatures, including man, feel well.

We urgently need information on the present-day status and needs of the remaining ivory bills. Although the quality of the remaining biotope has probably improved in the last sixty years, quantity may still be a problem. A recent increase in numbers is likely, but even in the most optimistic estimates the total population is unlikely to exceed two hundred birds, hence still very

vulnerable. Several potential threats such as dams and a renewed increase in logging have been detected. As always in science, knowledge can only grow in the presence of a free flow of information. While a critical assessment of all facts is central to good science, the situation not helped by those who oppose the spread any information that does not come with a Tanner-style movie.

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