# This-Fellow Frog, Name Belong-Him Dakwo

*New Guinea hunters taught the author how to drop his binoculars and become a better bird watcher*

by Jared Diamond

Twenty-five years ago a small boy said three words to me that changed the course of my life. It happened one night during my first week in the New Guinea Highlands, behind the Foré village of Miarasa, when I encountered the boy at the village stream where we had both come to wash. Never having traveled outside the United States before except to Europe, I was in a state of culture shock. I was excited and frightened—by the jungle, the dark, frizzly-haired people, the bows and arrows that all the men carried constantly, the mysteriously sudden collapse of the man assigned to cook for me, and the strange language. As no one in the village spoke English, I was trying to pick up Foré without any dictionary or grammar to help me. It was under those circumstances that the small boy, as curious and nervous about the white man as I was about him, greeted me with the fateful three words: "Dákwo wanípindi mindíe."

What did he mean? Was it a warning? The root *wani-* was easy, because people had already said it to me many times while pointing to water. The root *-pindi* seemed to be a postposition, or case ending, that meant "inside," as when people had shown me something inside a hut. I had already figured out that *mindie* meant the locative verb "is" with living subjects, as in "the bird is in that tree." Thus, the boy was telling (warning?) me that a *dakwo* was in the village stream—whatever a *dakwo* was.

In the darkness I could just make out the boy's face. I listened to the water's rippling, the cicadas in the jungle, the frog peeping from the stream, the . . . the frog! I pointed in the direction of the peeping, and at the next peep I tentatively asked, "dakwo?" The boy vigorously raised and lowered his head and firmly answered, "dakwo!" At the next peep each of us pointed toward it, simultaneously shouted "dakwo!" and laughed. Both of us relaxed. And I had learned another Foré word.

I was learning dozens of new words each day and thought no more about frogs until a week later, when a Foré hunter was guiding me along a jungle trail. We heard a short croak from the ground, and the hunter bent down and pulled a frog from under some moss. "Aha!" I exclaimed, proudly eager to show off my vocabulary. "Dakwo!" I waited for the smile of approval, the shared sense of a human bond forged across a cultural gap by an understood word.

Instead, the hunter scowled and shook his head from side to side. "No-got!" he told me sternly in pidgin English, which I was by now learning along with Foré. "This-fellow, him he no dakwo. Dakwo, he 'nother-fellow. This-fellow, name belong him ibisaraya."

Evidently, *dakwo* hadn't been a general word for frog but just for the particular species peeping in the village stream that night. The hunter explained to me that *dakwos* lived in streams, were very small and slim and brownish, peeped, and

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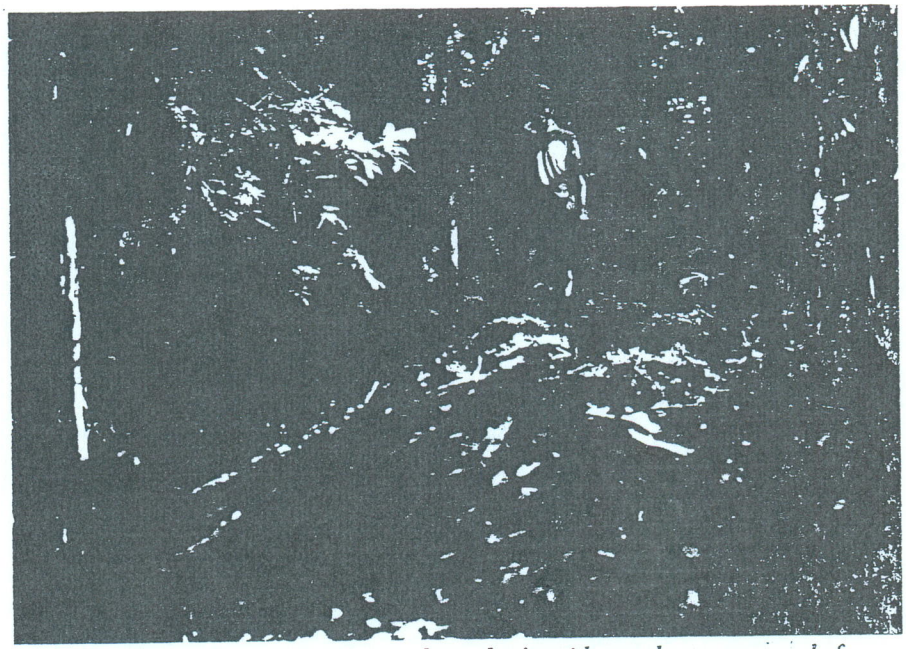

*On an island off southern New Guinea, the author's guide stands atop a mound of vegetation scraped together by a bird he called the* jangul. *Known to science as the common scrubfowl, the species uses the heat of rotting plants to incubate its eggs.*

weren't worth eating, whereas *ibisarayas* lived in the forest under moss, were big and fat and greenish, croaked, and were indeed worth eating. Next time I should pay attention, he said, and not confuse two such different creatures as *dakwos* and *ibisarayas*. What's more, there were plenty more "other fellow," and the hunter proceeded to name and describe fourteen more types of frogs, where they lived, what they looked and sounded like, and whether they were good to eat.

I had already seen that the Foré had some different names for different birds, but I hadn't appreciated the extent of their zoological naming. I then began to quiz them systematically. It turned out that in addition to 16 frogs (known collectively as *táro*), the Foré named 110 birds (*kábara* collectively), 1 cassowary (*ámanani*, not considered a bird), 15 little flightless mammals (*úmu*, including both rats and marsupials), 20 big flightless mammals (*íga*), 2 bats (*ísimi*), 17 lizards and snakes (considered together as *kwiyágine*), 1 fish (*úba*), and an uncounted large number of *kabágina* (insects and worms).

Even after years with the Foré, I didn't come close to exhausting their taxonomic knowledge. For example, during my third field season, when my Foré companions and I were starving in the jungle because of difficulties with local people, one of the men brought in a large rucksack full of mushrooms that he had found and started to roast. Dinner at last! But then I had an uncomfortable thought: what if the mushrooms were poisonous?

I patiently explained to my companions that I had read about some mushrooms being poisonous, that I had heard of even expert American mushroom collectors dying because of the difficulty of distinguishing safe from dangerous mushrooms, and that although we were all hungry, it just wasn't worth the risk. At that point my companions got angry and told me to shut up and listen while they explained some things to me. After I had been quizzing them for years about names of birds and frogs, how could I insult them by assuming they didn't have names for different mushrooms? Only Americans could be so stupid as to confuse safe and poisonous mushrooms. They went on to lecture me about twenty-nine types of edible mushrooms, of which fifteen grew on trees and fourteen grew on the ground. This one, the *tanti*, grew on trees, and it was delicious and perfectly safe.

Why is it that the Foré bother to name hundreds of kinds of animals and plants? In the case of mushrooms, edible birds, and birds with prized plumes, the advan-

criptions with Western scientific nomenclature. Sometimes it takes years—after twenty-five years, I'm still uncertain what bird the Foré are describing under the name *kwi-kwípa*. I love it also because many of the names themselves are delightful. There are short names, like *i, wo, kwok, screw, screw-screw, hihi, doo-doo,* and *piss-piss*. (No, those New Guineans were not pulling my leg with invented names: they were unaware of our U. S. slang meanings, and different people in a village independently proclaimed the same species to be the *piss-piss*.) There are long names, like *yor-bíchul-bíchul, kúntry-kúntry-knai, wai-squírty-squírty, dumánigenhióbe,* and *dinigahawasogeri*. There are names that sound like football cheers, such as the *go! go! harigi!* There are names that suggest a southern gentleman, such as the *i-bróchit-cáuley*. (Somewhere in South Carolina there must be an office door with the sign, J. Stroud Heaney and I. Brochit Cauley, Attorneys at Law.) Some of the names are onomatopoetic renderings of the bird's call, but most aren't. The only generalization I've noticed is that the length of the name tends to vary inversely with the size of the bird: names like *i* usually refer to eagles, while one like *dinigahawasogeri* is guaranteed to be some tiny mouse-babbler.

In most cases of New Guinea bird names, one name corresponds to one bird species recognized by Western taxonomists. Among some species of birds of paradise in which females and adult males differ greatly in plumage, the sexes may receive different names: for example, Princess Stephanie's bird of paradise male = *tawánta*; female = *ókai*. However, people are aware that these are different sexes of the same bird. Conversely, a set of similar species is occasionally lumped under a single name, but my informants were often aware of the different species involved. For instance, Teu Zinghite used the name *hínge* for all three of Kolombangra's small blue kingfisher species. However, he proceeded to describe their differences and to tell me that one (which is known to Western scientists as the dwarf kingfisher) lives in jungle, one (the little kingfisher) in mangrove, and one (the common kingfisher) along rivers and the sea coast.

These correspondences between classifications by New Guinea villagers and by Western scientists are significant in view of the common misconception (even among some scientists!) that species are no more than taxonomists' arbitrary divisions of the natural world. In fact, species recognize each other as distinct and usually avoid interbreeding with other species in the wild. This objective reality of species provides the reason why New Guineans and Western taxonomists, all experts but using different criteria, arrive at such similar classifications of species.

Since New Guineans don't have zoom-lens telescopes and other props of American birders, how do they manage to reach the same identifications that we do? Some bird species that New Guineans without binoculars effortlessly distinguish in the jungle look exceedingly similar, even when held in the hand. For example, New Guinea has a notoriously confusing group of small, dull olive warbler species in the genus *Sericornis*. When I first encountered them in the Foré area, they were my nemesis. Some individuals looked a bit larger than others, and some seemed to have a bit more buff in the face or more brown in the wing, but I still couldn't confidently separate my mist-netted specimens, and I couldn't distinguish live individuals in the jungle at all. Only when I brought my specimens back to the American Museum, measured them, and compared them with labeled specimens did I become certain which species was which. Yet the Foré could confidently identify which were *pasagekiyábi* (buff-tailed sericornis) and which were *mabiséna* (large sericornis), even when they glimpsed them in silhouette at a few dozen yards in the dimly lit jungle!

Eventually, I caught on that the Foré were distinguishing the warblers by slight differences in foraging behavior, body proportions, and preferred height above the ground, while I was a prisoner of my learned dependence on plumage field marks visible through binoculars. I had been reared on Peterson field guides, with their neat, colored plates and arrows pointing to diagnostic features. On glimpsing a bird, my reflex reaction was to raise my binoculars, look for details of feathering, and compare against a mental checklist of characters. Never having become addicted to binoculars, the Foré instead took in the whole gestalt and immediately made their identification. As another example, the three cuckoo-shrike species common throughout the Solomons looked similar at a distance and gave me trouble, until Teu pointed out to me how he identified them so easily. The yellow-eyed cuckoo-shrike had a light underwing, visible even from afar as it flew—the "bird with the plastic wings," as Teu called it. I had been wasting time looking to see if the eye was yellow, a hopeless task at a distance—even with binoculars.

New Guineans frequently teased me about things that were easy for them but hard for me. They joked not only about my confusing *pasagekiyábis* with *mabiséna*s but also about my tendency to stumble and to lose the trail in the jungle. They assured me that I could become as competent as they if I would only discard my Western props and develop my personal resources as they did. Typical helpful suggestions were, "Throw away your boots, go barefoot, and you'll be able to walk strong like us"; "Throw away your compass and you won't get lost so often"; "Throw away your binoculars, just use your eyes, and you'll be able to identify *pasagekiyábis* like we do." I never did get the courage to discard my boots, but I did leave my compass home and suppressed my instinct to reach immediately for binoculars. I started looking at birds first. As a result, I became a better bird watcher.

The other reason that New Guineans are so good at field identification is that they know exactly what bird species occur in their area, have names for them, talk a lot about them, and thus retain memories even of rare species. For example, when I visited Sasamunga village on Choiseul Island in the Solomons in October 1974, the guide I hired to take me bird watching in the jungle was an old man with whom I had the usual long conversation about every bird he had ever seen. He described a large pigeon, evidently the rare yellow-legged ground pigeon, which he had seen only once in his life. That had happened in his boyhood, when some Americans on a sailing ship had visited Sasamunga, collected many birds, including one of that rare pigeon, and boiled down some carcasses of beached porpoises.

Suspecting that the old man was referring to the American Museum's famous Whitney South Seas Expedition, I looked up the Choiseul section of the expedition journals, still preserved in the Museum's Department of Ornithology. There I read how, in October 1929, the expedition's collectors had prepared skeletons of beached porpoises at Sasamunga and how they had also collected at Sasamunga their sole Choiseul specimen of the rare yellow-legged ground pigeon. Forty-five years later, the old man could still give me an accurate, detailed description of that pigeon, which he had seen once as a child.

While New Guineans thus have the advantage of knowing every bird that occurs in their area, they are also spared the opposite disadvantage: their minds aren't cluttered with information about every bird that doesn't occur in their area. From this point of view, my knowledge of New Guinea's 725 bird species is a disadvantage. I know every species that has ever occurred on the whole island of New

Guinea, but when I visit a site in New Guinea, I don't know exactly which species occur at that particular site. I'm comparing each bird that I see against 725 possible identifications, while the local people are comparing it against the mere 120 to 180 species they know to be present. Like Sherlock Holmes, and unlike me, their minds aren't cluttered with useless information.

New Guineans also aren't distracted by our passion for identifying a "new life bird." When I took some of my Foré Highlander friends down to Karimui in the New Guinea lowlands, they simply identified each unfamiliar bird species they encountered by the name of the most similar Foré bird. At first it upset me that they referred to the chestnut-bellied fantail of the lowlands as *ninikésu,* their name for the familiar friendly fantail of the Foré area. Surely they could see the differences, I told them. But the differences neither troubled them nor hindered their correct identification of the Karimui bird as the friendly fantail's closest relative. They reasoned that although Karimui's people differed somewhat from Foré people, they were still people. Therefore, why shouldn't Karimui's *ninikésus* also be somewhat different?

The older people in New Guinea and the Solomons know so much about birds because they have spent so much of their lives hunting birds, looking at birds, talking about birds. The younger people today go to school, learn Western things, spend little time in the forest, and know little about birds. Schoolchildren often lump all black-and-white birds under one name. I recall a poignant conversation I had in 1976, when I visited Rennell Island in the Solomons. I was talking with Charles Tetuha, a middle-aged man, about Rennell's remarkable birds and culture, and also about the rapid changes sweeping over the island. The younger people wanted money, jobs, and material goods and didn't care about Rennell's unique environment and traditions.

In the middle of our conversation, an individual of Rennell's second commonest bird, a little warbler known to Rennellese as the *lókelóke,* almost flew into us. We laughed, until Charles wistfully said, "My children won't even know what a *lókelóke* is." With the passing of Charles Tetuha's and Teu Zinghite's generation, an enormously detailed knowledge of a vanishing fauna will also disappear.

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