

Record: 1

Title: In the Company of Humans.
Authors: Terborgh, John
Source: Natural History; May2000, Vol. 109 Issue 4, p54, 10p, 5 color
Document Type: Article
Subject Terms: HUMAN-animal relationships
COMMENSALISM
ANIMALS

Abstract: Deals with the psychological and evolutionary reasons why humans are attracted animals and wild animals to humans. Information on the beater syndrome; Commensalism and the cleaner syndrome; Homophilia in animals; Evaluation of the behavior of several animal species toward other species.

Lexile: 1230
Full Text Word Count: 3200
ISSN: 00280712
Accession Number: 3017636
Database: MAS Ultra - School Edition
Section: NATURALIST AT LARGE

IN THE COMPANY OF HUMANS

Sometimes wild animals are attracted to people. They seem to weigh the risks of associating with us and conclude that under certain circumstances, hanging out with Homo sapiens is the safest thing to do.

In The Biophilia Hypothesis, biologist Edward O. Wilson addresses the psychological and evolutionary reasons humans are attracted to animals. My own experience as a field biologist has exposed me time and time again to convincing evidence that many humans are indeed powerfully drawn to animals. For more than three decades, I have spent part of every year in the Peruvian Amazon, where I have been privileged to visit villages belonging to half a dozen premodern tribes. Nearly every household has included pets, and even though many of these pets ultimately wind up in the supper pot, the villagers treat them with obvious affection. Among the animals selected are birds of assorted sizes and habits, tortoises, iguanas, and mammals (especially primates but also peccaries, agoutis, and coatimundis). Many have been captured as juveniles, usually by hunters who shot the mother; the young are then raised by humans, who sometimes even suckle them until they can be weaned.

This story has a flip side, however. Under certain circumstances, wild animals are drawn to people. Not always do they flee or recoil from humans; instead, it has often seemed to me, the animals quietly observe them as if attempting to judge their intentions. Then, if the people appear to be nonthreatening, various kinds of interactions become possible.

But before I begin to elaborate on why animals may choose to associate with humans, perhaps I should review the circumstances in which animals of different species are drawn to one another. In the forests around the Cocha Cashu Biological Station in Peru's Manu National Park, such associations are common. In one type, called the beater syndrome, one species unintentionally makes food available to another by creating a disturbance as it

moves through the habitat. The beater syndrome is a form of commensalism--the unilateral transfer of benefits from one species to another at little or no cost to the benefactor.

One of the beneficiaries of the beater syndrome in Manu is the rare huanganapescco, known in English as the rufous-vented ground cuckoo. In Quechua, the language of the Incas, pescco means "bird," and huangana is the local name for the white-lipped peccary, a New World mammal similar to a pig. These peccaries are half again as large as the more familiar collared peccary, and they travel in imposing herds that can number in the hundreds, blackening the forest floor with their massed bodies and filling the air with a cacophony of bleating, rumbling, and clacking. Using a tactic similar to that of the cattle egret, the huanganapescco positions itself amid a herd of peccaries and keeps a keen eye out for the lizards, frogs, and arthropods routed by the animals' hooves. Meanwhile, overhead, several woodcreepers cling to tree trunks, ready to snatch insects that take wing to avoid being trampled.

A more intimate form of commensalism, termed the cleaner syndrome, involves direct body contact between the associates, implying both trust and recognition. Viewers of nature programs on television are familiar with the cleaner wrasse, a small coral reef fish that makes a living by nipping parasites off larger fish. The most famous terrestrial cleaner syndrome involves the colorful tick birds of the African savanna. These birds forage exclusively on the backs and legs of large mammals, where they dine on parasites, principally ticks. The Amazonian counterpart of Africa's tick bird is the giant cowbird, which forages independently most of the time but deticks capybaras and tapirs when opportunity knocks. Obviously comfortable with the relationship, capybaras (the largest living rodents) are unfazed when cowbirds alight on their heads and begin to peck around their eyes and ears.

Sometimes birds of a feather flock together for less transparent reasons, as one unplanned "natural" experiment showed. Years ago, as a graduate student at the University of California, Berkeley, ornithologist Pete Myers was studying sanderlings--the pale little sandpipers that frenetically chase waves up and down beaches along both coasts of North America. During the first winter of his study, based at California's Point Reyes National Seashore, Myers observed that sanderlings, when not foraging, roosted amicably in large flocks on sandbars. But when the tide was propitious, they spread out along the beaches and set up individual territories, chasing away any rival sanderlings that ventured too close. This behavior provided gratifying confirmation of the then-new theory of optimal foraging, which held that the highest feeding rate could be attained by individuals that maintained exclusive rights to a foraging area. In this case, the area was a strip of beach about a hundred yards long.

The following year, Myers encountered an entirely unanticipated situation. Instead of spreading out and confronting their neighbors in hostile face-offs, foraging sanderlings bunched together in tight little flocks. Many birds feeding in a small area quickly deplete the prey, however, lowering individual foraging success and compelling a flock to keep moving in quest of fresh sites. Clearly the birds were paying a price for their newfound togetherness. The question was, What had inspired them to change their behavior so profoundly?

Myers soon discovered that a merlin (a small falcon) had taken up residence that winter at Point Reyes. Although the merlin was usually out of sight, the sanderlings never forgot

that a predator was in the vicinity. Membership in a flock meant that each individual gained the advantage of more eyes and ears to detect the approaching predator.

The costs of joining a flock, school, or herd can be lower when an animal joins a group composed predominantly of other species. Consorting with aliens, as it were, offers all the advantages of foraging in a group, while it minimizes competition with other individuals of the same species. This probably explains why flocks of birds consisting of many species, but no more than a few individuals of any one, are so commonplace around the world.

By now, the reader is surely wondering what all this has to do with what I call homophilia (literally, a friendly feeling toward humans) in animals. In fact, it has a great deal to do with the rest of my story, which begins with trumpeters.

Distant relatives of cranes, trumpeters are long-legged, chicken-sized birds that glean fallen fruit from the ground. Unlike other birds that live on the forest floor, trumpeters are not particularly shy and readily habituate to the presence of humans. One day, while observing monkeys feeding in a giant fig tree, I understood why.

Shortly after the monkeys began to eat--sloppily dropping nearly as much fruit as they consumed--a group of trumpeters showed up on the forest floor beneath them. Soon an agouti (a large tropical rodent) appeared and began to feed among the trumpeters, which were unperturbed by its presence. Before long, a group of collared peccaries joined the crowd. Again the trumpeters showed no reaction at all.

I later learned that various terrestrial mammals routinely join feeding trumpeters, presumably to benefit from various loud alarm calls that the birds make against such animals as jaguars, bush dogs, eagles, and snakes, as well as from their habit of posting sentinels whenever other group members are feeding. To the trumpeters, I realized, a person is just one more large but nonthreatening mammal come to join the group.

All these animals appear able to recognize a good thing when they see it, and my many years at Manu have convinced me that our little research station--by providing opportunities for safety that some animals decide to take advantage of--is a bit like the group under that fig tree. The station's unobtrusive buildings bring the scientists into unusually close contact with the inhabitants of the surrounding forest. Every year, certain individual birds and mammals linger near the station, often strolling in open view through the clearing or perching right in front of a building, hardly more than an arm's reach away.

The species that have shown such boldness are extraordinarily diverse in their habits and diets and thus seem to have no common denominator. Among those that have been drawn into our midst are tinamous--plump, partridge-like birds notorious for their shyness. A small path that leads from one group of our buildings to another apparently cuts through areas frequented by these birds. Observing that humans passed by at frequent intervals without adverse consequences, several tinamous grew so comfortable with our presence that they would sometimes stand in the middle of the path and fail to budge when someone approached. Occasionally I found it necessary to make a verbal request before a tinamou would step aside so that I could pass.

Over the years, I have sometimes sought refuge from the hubbub of the station in a screened tent in the forest. One morning, after I had sat down at my desk, a movement in the tent caught my eye. It was one of the "tame" tinamous. The bird did not seem to be the least bothered about sharing the cramped space of the tent with me. It calmly strolled

around inside for a few minutes and then let itself out through a crack at the bottom of the door.

Tinamous have demonstrated the flexibility of animal behavior in other ways as well. Several years ago, we kept chickens at the research station. (We were studying ocelots at the time and needed chickens to lure the cats into our traps.) I happened to glance idly at a group of foraging chickens one day and was thunderstruck to see two tinamous scratching and pecking among them. They were doing two things tinamous never do (or so I had thought): participating in a social group of foraging birds and exposing themselves to an open sky that might have contained raptors. This scene of inter-specific amity was repeated day after day as the tinamous took advantage of the safety in numbers provided by our chickens.

One of the habituated birds I remember best was a piping guan--a chicken-sized bird normally found only in the highest treetops--that chose to nest only two yards from a building under construction. As the guan calmly sat on her nest, a team of carpenters erected beams and nailed them into place almost eyeball to eyeball with the unflappable bird. Even the chainsaw didn't disturb her. Eventually the guan's three eggs hatched into downy chicks, and for many days afterward she remained within a few yards of our buildings while she tended her growing brood.

Birds have not been the only creatures at our site to seek the company--or at least the nearness--of humans. Perhaps the most remarkable were Howeird and Moreweird, two subadult male red howler monkeys. Howlers are among the most distinctive and characteristic primates of the New World tropical forest. The adult males' roars are often so loud and startling that first-time visitors are convinced they are in the immediate presence of a jaguar. In reality, however, few animals could be less threatening than these languid vegetarians that spend much of every day lounging in the canopy digesting leaves.

One extraordinary day a number of years ago, primatologist Patricia Wright was doing her laundry when a furry red limb suddenly intruded into her field of vision. Looking up with a start, she confronted a howler monkey backing down the very tree to which the washboard was attached. Transfixed in surprise, Pat stood motionless as the monkey proceeded down to the ground under the washboard, where it set about eating soil that had been soaked in wash water. So unconcerned was the howler by Pat's presence that at one point it rested its hand on her shoe.

Howler monkeys are well known to engage in geophagy, or earth eating, though the reason they do it remains unclear. One idea is that the soil provides certain mineral elements lacking in their diet of fruit and leaves. Another hypothesis is that clay minerals in the soil help alleviate the effects of some of the toxins that must inevitably be ingested by an animal that consumes leaves.

After Howeird had broken the ice with Pat, he began to hang around the station buildings, often resting in the rafters under the open roof when Pat was inside. Although she never fed him, Howeird persisted in following her around. When she went to her tent for the night, Howeird was right behind. Not wishing to spend the night with a monkey in her tent, Pat would quickly slip in and zip the door behind her. Undiscouraged, Howeird would climb up a small tree that overhung her tent and spend the night there.

After several days of this behavior, another subadult male howler, duly named Moreweird, joined Pat and Howeird. The three of them were nearly inseparable until the day the two

monkeys just vanished into the forest, never to be seen again. Their departure was as unexpected as their arrival. Pat, who enjoyed imagining that true love had brought the howlers out of the forest to her, was soon forced to accept that the attraction was something more mundane: the two monkeys departed right after her bottle of lemon-scented detergent ran out and was replaced by one of a different brand. A dejected Pat had to admit that they didn't love her after all; they only loved her detergent.

Last year, something nearly as remarkable happened--less amusing but deeply touching. At lunch one day, a student announced a very unusual sighting: a lone huangana. Finding one of these big peccaries all by itself and away from its herd was unprecedented in our experience. The student had encountered the animal half a mile to the north of the station and noted that it appeared sick and lame. Late that afternoon, another researcher met the same animal only 300 feet from the station. It had been standing in the middle of Trail 1, the main thoroughfare between the station and our port on the Manu River. When confronted by the approaching human, the huangana hobbled a few feet off the trail and stood there while the researcher passed by.

The next day several people saw it, always standing at the edge or in the middle of Trail 1. The animal could not have selected a busier place to reside; many people, often in noisy groups, go back and forth to the port every day. Yet the huangana chose to settle precisely here. For the first few days it seemed to be in decline, limping badly and responding listlessly to the blandishments of nervous researchers who didn't want to get too close to a potentially dangerous animal.

After perhaps a week, the huangana appeared more alert and was steadier on its feet, although I don't know what it could have been finding to eat during all that time. Had the animal wanted to distance itself from further contact with humans, it could easily have done so. But it remained in the middle of Trail 1 by day, and by night, we discovered, it quietly bedded down just a few feet from an investigator's tent.

I can think of no other way to interpret the huangana's behavior except to imagine that it "wanted" to be close to humans. Why else would it have walked half a mile in an enfeebled condition to be near us?

The huangana is a prime example of a species that seeks safety in numbers. Its archenemy, the jaguar, never launches a frontal attack on a herd, because adult peccaries defend them selves with long, saberlike tusks that could easily disembowel a big cat. Instead, the jaguar stalks the herd in the hope of being able to assault a juvenile or a peripheral individual and subdue it before the others react. A lone huangana is thus in a very vulnerable situation. From a jaguar's point of view, such an animal is a freebie.

Our peccary must have decided that the risk of consorting with humans was less than the one it faced by remaining alone in the forest. Perhaps it had noticed that the jaguar was seldom in the vicinity of the station. Whatever its reasoning, the huangana was right. Its vigor and agility steadily improved until, one day, a herd of its species crossed Trail 1 and our peccary was gone.

As a scientist, I am admonished to be unrelenting in my skepticism and to demand the highest standards of evidence before drawing conclusions. Above all, I should resist any temptation to construct anthropomorphic interpretations. What I have recounted here are anecdotes--isolated occurrences of an essentially unrepeatable, and thus scientifically untestable, nature.

Nevertheless, having spent a lifetime observing animals in the wild, I have come to the conclusion that many birds and mammals are highly observant, that they are able to weigh very abstract risks, and that they can reach conclusions based on the assessed balance of those risks and then take appropriate action.

Night and day, the Amazonian rainforest teems with predators. No animal, except perhaps a top carnivore, can afford to be unmindful of the omni-present threat of predation. If animals can be said to think about anything, heading the list must be how to conduct their lives in a way that minimizes exposure to predators--since, of course, only living animals can pass along their genes.

Whether a particular bird or mammal is territorial or social is commonly regarded as characteristic of the species. Pete Myers's sanderlings, however, demonstrated a capacity for radically altering their behavior in direct response to an increased threat of predation. So did the habituated tinamous at our research station when they perceived that by consorting with chickens, they could forage in the open at reduced risk. Monkeys are similarly opportunistic in their choice of companions. Never at ease when alone, bachelor males routinely seek the company of other species of monkey. Howeird and Moreweird apparently decided that Pat could provide some sort of protection against predators. To be alone is to be vulnerable, because no animal is able to maintain vigilance 100 percent of the time.

I am not suggesting that animals have the same intrinsic affinity for people that E. O. Wilson claims people have for animals. But when under the threat of predation, many animals do have an affinity for other animals, whether of their own or of different species. Having been taught as a child that nearly all animals instinctively avoid people, I was pleasantly surprised to learn that animals can occasionally overcome their inhibitions and see us as benign. My colleagues and I at Manu are gratified when the birds and mammals with which we share the forest choose to draw near, even if it is only to use us as foils against their enemies.



Reclining Nude, by Tommy Dale Palmore, 1976



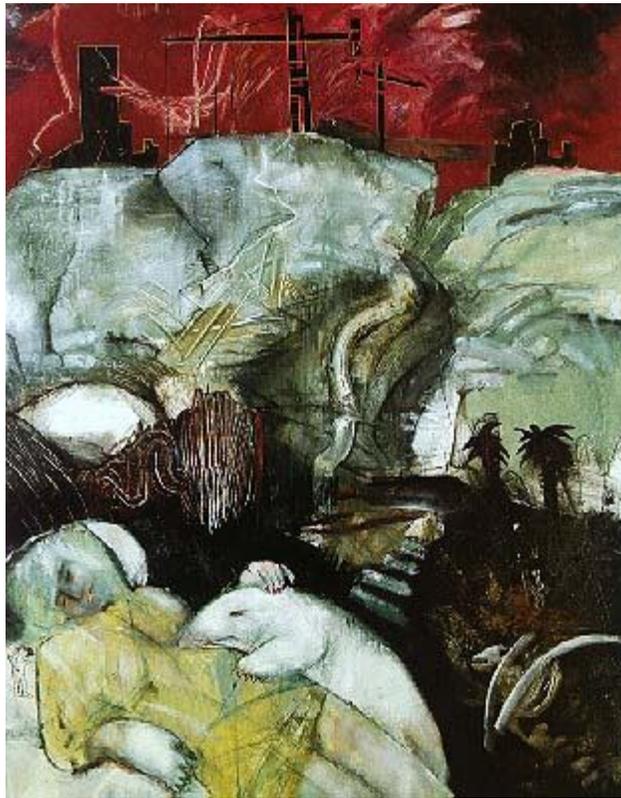
Happy, Crazy American Animals and a Man and Lady at My Place, by John Wilde, 1961



Jungle Cats, by John Alexander, 1987



The Fifth Trumpet Call I, by Mary Frank, 1984



Erda: The Earth Goddess, by James G. Davis, 1987

~~~~~

By John Terborgh

---

Copyright of Natural History is the property of Natural History Magazine, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.