



Creating the Nation's first BioPark

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Letter from the Desk of David Challinor
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"In the Spring a young man's fancy lightly turns to thoughts of love," wrote Tennyson, but love can never fill all our waking hours, and so I write you now about the special thoughts of young men and women whose inherent bent is toward the study of the natural world around them. Tying this letter in with the last, I would like to discuss briefly the motivation and methods used by scientists such as Oftedal and Boness in studying animal behavior. Just as there is a legal mind, so there is also a scientific one, especially among natural historians.

Such scientists generally first manifest their interest in childhood. For example, I remember, when 6 or 7, being puzzled by the failure of my parents to distinguish between the 4 or 5 different species of local sparrows. This early desire to observe and classify was evinced by my 3-1/2 year old grandson when he said, in response to his grandmother, "Granny, that's not a bird, it's a duck!"

A fascination with the changing world of nature triggers careful observation in susceptible people, so that depending on one's interest, it is easy to learn the names of different trees, fish, birds and mammals. When such an early spark is sustained and encouraged, professional careers in natural history often result. From my own experience, I assure you there is nothing more rewarding than being in a tropical forest or even on an ice floe and suddenly realizing, "I'm being paid to be here!" When avocation and vocation merge, one is truly blessed.

Most professional naturalists feel similarly rewarded and are continuously inspired to observe their animal subjects ever more intently. Ironically, with every piece of new knowledge acquired, corresponding lacunae in the web of understanding unexpectedly appear. For example, all rhinoceri have horn[s] on their snouts. For many years, scientists thought that the the horn was used by males to assert dominance. Not long ago, however, while studying the one-horned rhinos of Nepal, Smithsonian scientists found a large male, with a horn worn short, who was still controlling a harem of females. His dominance seemed to confound earlier theories, but by keeping this particular male under close observation (from elephant back) for months, the scientists noted that biting, not horn use, was

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the principal way the males asserted dominance. This behavior explained why they had seen males with knife-like cuts on their shoulders. Further study found that a rhinoceros incisor so fits the tooth directly below it that when a rhinoceros chews, the action of one tooth against the other maintains a sharp chisel edge on both teeth. This mechanism appeared very clear when the scientists manipulated the jaw of a rhino skull.

Now that we know for what purpose the horn is not used, we must await the brilliant insight of some future ethologist (one who studies animal behavior) on why the horn might have evolved at all. The answer could be staring right at us, but we have not been able to "see" what we are looking at.

Although scientists sometimes miss the obvious, improved technology has allowed them to "see" heretofore undreamed of scenes and actions, such as the surface of Mars or the bizarre creatures living next to thermal vents in the abysmal depths of the ocean. Night vision enhancers, developed during the Vietnam war, allowed scientists to discover that bats are the pollinators of certain night blooming vines in west Africa. Last month I described how an ice breaker and two helicopters enabled Oftedal and Boness to catch the brief 3-day birthing, nursing and breeding of the Hooded seals off Labrador. A week or so of fog (not uncommon in those parts) would have meant another year's wait.

Patience and luck are, therefore, prerequisites for ethologists. Endless time is often spent in finding the plant or animal to be studied, and years of intense observation follow. The rewards of a new insight on behavior, however, more than offset the discomfort, delays and disappointments encountered. Something new and exciting is always around the corner, and the present practitioners of ethology rejoice in the certain knowledge that one of their successors will learn, for example, while scuba diving in the Greenland Sea, why the male Narwhale modified his left canine into such an unwieldy spiral tusk. There is no shortage of unanswered questions -- more than enough to keep generations of scientists happy and stimulated. As my friend, Professor David Stoddart, so aptly put it: knowledge is like "an island in a sea of ignorance, for the more the island expands the longer its shoreline will be with the unknown."