

THE BIOLOGICAL BASIS OF COLLECTING

Collectors have turned the adaptive tendency to classify the environment into a harmless obsession.

N.K. HUMPHREY

In 1974 Charles Sibley of Yale University was fined \$3,000 for "illegally importing bird parts taken abroad in violation of foreign wild life laws." The "bird parts" in question were eggs. Sibley's prosecution was the result of detective work carried out by Richard Porter, investigations officer of the Royal Society for the Protection of Birds and scourge of British egg collectors. Porter himself expressed bewilderment at the activities of the men he hunted down. "Why do they do it?" he asked. "They camp out in appalling conditions. They carry out a desperately dangerous climb sometimes. Then they put the eggs in a cabinet with just themselves and a few friends to see them. They're just like kids."

Fifty years earlier the Russian physiologist Ivan Pavlov had remarked with equal scorn on the passion for collecting. "Notwithstanding the worthlessness of the goal, everyone knows the dedication, the singlemindedness with which the collector achieves his purpose. He may become a laughing stock, a butt of ridicule, he may suppress his fundamental needs all for the sake of his collection."

Collectors usually collect material things. Widespread—and no less

N. K. Humphrey is assistant director of the department of animal behavior at the University of Cambridge in England, and is writing a book called The Evolution of Consciousness.

strange—is the devotion people show to "spotting," to collecting *observations*. In England "loco-spotting" has long been a hobby of schoolboys. Any object will serve: birds, mushrooms, plants, license plates, pub signs, autumn leaves. Although for most children spotting is simply today's passion, instigated by a teacher or a collector friend, many adults are addicted to pastimes no less peculiar. The "aero-spotters," young and old, who throng the terminal roofs at Heathrow Airport, provide big business for the London shops that cater to their needs. "The typical aero-spotter does nothing other than aero-spot," the proprietor of a shop for spotters once explained to a reporter. "He isn't married or anything like that."

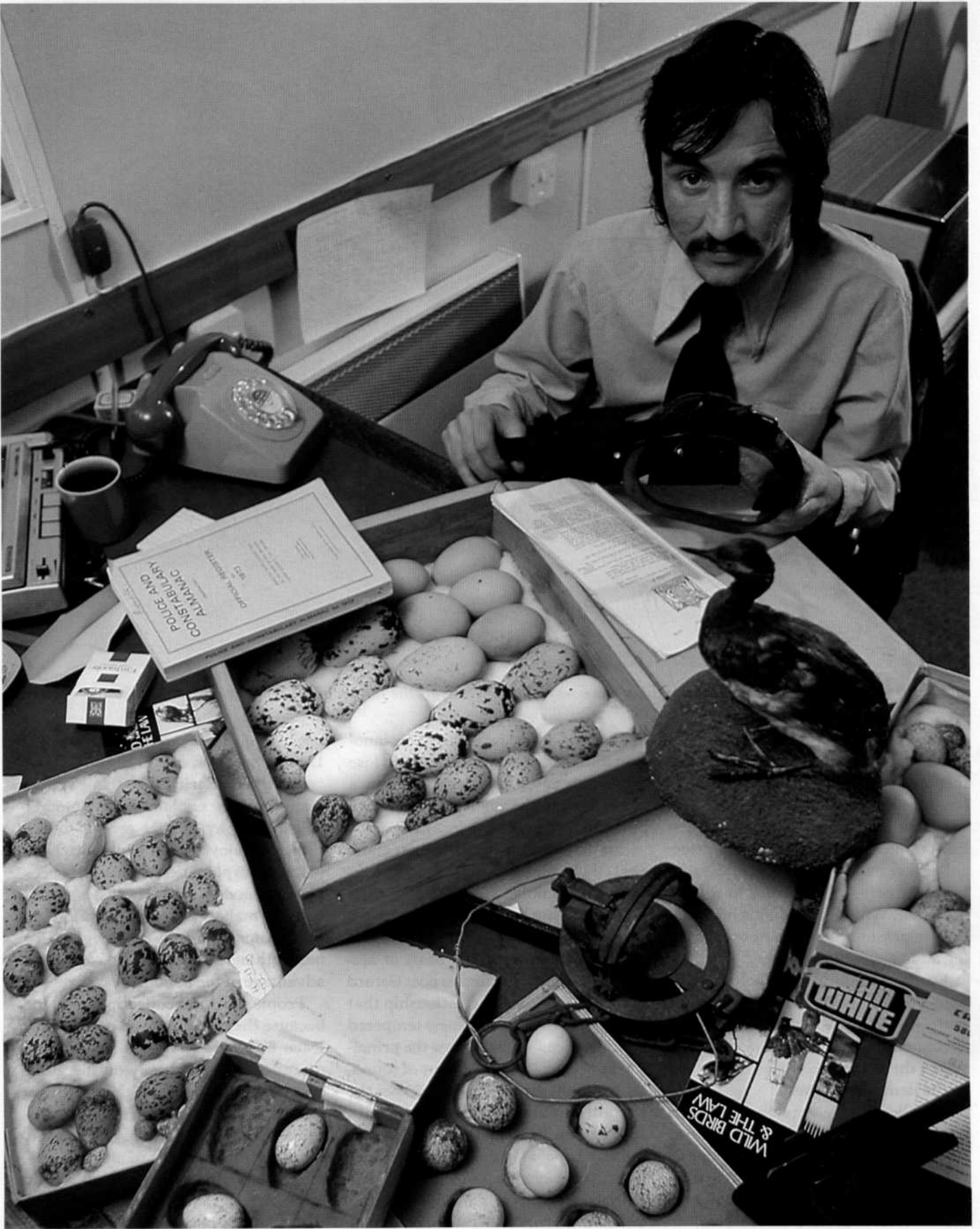
That a man should become so engrossed in a pursuit that he risks his life on a mountain, exposes himself to ridicule, or denies himself the possibility of marriage needs explanation. Biologists generally assume that most behavior patterns they observe in animals are functional. That is, the behavior helps the animal to survive and to reproduce. Most kinds of collecting are, in these terms, completely dysfunctional—and the biological fitness of unmarried aero-spotters must be zero. Despite its clearly unfunctional role, collecting may derive from a biological trait that, in the proper circumstances, is necessary to human survival.

Collectors, admittedly, are not all of

a kind. To some, the owning of a collection is all-important; they may have little in common with the spotters who simply record their observations in notebooks or hold them in their heads. But I believe it would be wrong, despite common prejudice, to pay too much attention to ownership as such. Collectors of objects—as much as collectors of observations—are usually (and primarily) in it not for the material satisfaction, but for the mental thrill it gives them. Collecting is essentially a mental activity. The pleasure people get from it derives from the satisfaction human beings take in classifying experience. People enjoy making comparisons, uncovering relationships, and imposing order on the world; and here lies the clue to collecting's function.

A collection is different from a haphazard accumulation of rare or grotesque objects. Collectors can become fascinated by almost any type of object: buttons, stamps, butterflies, matchbooks. Yet you will never find a single collection with all these objects in it. To qualify as a collection, the objects must belong to a strictly defined group. A political button cannot be part of a stamp collection, nor can a stamp be part of a collection of snuffboxes, however rare and valuable each may be. The same goes for spotters: A seaplane-spotter absorbed by the *Albatross* on the tideway is unlikely to notice the Arctic tern circling above it.

The second condition that distin-



The urge to collect compels men to violate the law, as Richard Porter, scourge of British egg collectors, has discovered.



Bill Dutcher has collected Tarzan memorabilia since he was a boy; he runs the Tarzan fan club in the United States.

gushes an aggregation from a collection is the rule that, although all the members of a collection must be similar, none may be so similar as to duplicate another. Fifty identical McGovern buttons do not make a political-button collection, and 50 sightings of the same butterfly bring no pleasure to a lepidopterist. Within the bounds of a particular passion, the collector searches for, and values, differences.

So the structure of a collection—based on the principles of unity and variety—distinguishes it from a mere accumulation. The relationships between the items become as important as the items themselves.

If collecting is governed by such clear rules, we must reject the idea that it is a tendency to hoard or acquire things. Commercial exploitation, whereby an ever-widening array of model cars is pushed at children, or paintings are extolled as a hedge

against inflation, prostitutes an innocent human drive. Spotters cannot lose their innocence, for no one can put a price tag on the sight of an elusive butterfly or an obsolete locomotive.

Spotters and collectors often claim that their pleasure is primarily aesthetic. Certainly, to collectors, their collections are beautiful, and there is a parallel between collecting and aesthetic appreciation. The basis of aesthetic design, according to poet Gerard Manley Hopkins, is a relationship that can be described as "likeness tempered by difference." Hopkins saw the principle in rhyme: "an agreement of sound, with a slight disagreement." Either the parts of a collection or the sightings of a spotter can be said to rhyme in this sense. "Look at the crested titmouse eggs," said one of Professor Sibley's British egg-collecting friends to an interested journalist. "This one belongs to the *Scottish* crested titmouse, this

one to the *Continental* crested titmouse. Look at the *difference*."

But the similarity to aesthetic appreciation cannot explain the function of collecting. Saying that people collect things to enjoy aesthetic pleasure is no better an explanation than saying people eat food because it tastes good. Nature makes behavior pleasant so that animals will do it. The pleasure has nothing to do with the biological advantage of the action.

People may find collecting pleasant because they have evolved prepared to learn about the world. If survival requires an animal to rely on the guidance of a mental model of the world and how it works, the animal is likely to find the development of the model pleasant. By using this internal model, the animal can predict aspects of objects it "recognizes," anticipate events, and then plan its behavior. The ability to classify becomes an essential way to



Music boxes are the passion of Jeremie Ryder; every item in the picture, including the painting on the wall, is a music box.

organize experience and introduce economy into the animal's model. Any system of organizing and classifying divides experience so that all the items in a given class have a common feature that the animal finds significant. By relying on its system, the animal has less to think about, can learn faster, and can predict what may happen in different circumstances.

Animals that devised precise methods of classification and enjoyed classifying became good candidates for survival. Indeed, evolutionary pressure to classify may have been as strong as the pressures that made eating and sex so efficient and enjoyable. If animals do have an innate tendency to classify the

world, that tendency will show in their actions.

Before an animal can devise such a system, it must have a store of data based on the evidence of its senses. But unless the animal actively and systematically explores the world, seeking information that applies to its problems, the system will be useless. The animal must be able to distinguish essential characteristics from the accidental ones—it must learn to tell the difference between the unchanging aspects and those that change from incident to incident.

Suppose a child must learn the category "bird." He must pay attention to features common to the class, such as

wings, while ignoring color or size. Only by comparing numerous similar but different birds, noticing that storks, gulls, and robins have certain common features, can the child succeed. Two robins give no more information, nor does a wholly unrelated item, say a flower. The same rules apply for all types of objects. The essential characteristics of any category can be learned only by seeing the numerous kinds of objects in it.

If classification is so bound up with survival, animals simply had to evolve patterns of behavior that gave them the experience they needed. They developed patterns for exploring the world, searching for variations on a unifying theme, and becoming collectors—collectors of observations.

This kind of structured exploratory behavior is easily seen in very young babies. As Jerome Kagan of Harvard University has shown, infants take joy in discovering stimuli that are different from what they are accustomed to seeing—but only slightly different. And as Patrick Bateson and his colleagues at the University of Cambridge have found, baby chicks will, given the opportunity, try actively to make a familiar stimulus different.

When exploring the world in order to classify it becomes an all-encompassing activity, it has exceeded its evolutionary function. Perhaps human artifacts—the coins or political buttons that are so easy and satisfying to classify—pervert our natural tendency to seek order in the world. The collector of buttons may be as far from the mark as the gull that, seduced by a giant china egg, pushes her own eggs away and settles down to hatch the irresistible but sterile dummy. □