

S. stellae-polaris is probably a common parasitic helminth of oceanic birds of the Northern Hemisphere. The recovery of specimens from the Pacific subspecies of *Fulmarus* in California suggests that this parasite must have a circumpolar rather than solely North Atlantic distribution. It is interesting that five other species of *Stegophorus* have been found in at least 11 species of sphenisciform and procellariiform birds of the Southern Hemisphere (Johnston and Mawson, *Trans. Roy. Soc. So. Austr.*, 66: 66-70, 1942; Mawson, *Parasitology*, 43: 291-297, 1953). Nematodes of the genus *Stegophorus* have been recorded to date only from oceanic birds nesting on islands or continental sea cliffs in cold northern and southern seas. It seems possible, as more is learned about the host and geographical distribution of *Stegophorus* species and other acuariid nematodes, that these parasites may serve as useful indicators in zoogeographical studies of their hosts.—FREDERICK L. DUNN, *Division of Parasitology and The George Williams Hooper Foundation, University of California, San Francisco Medical Center.*

Secondary DDT Poisoning in a Sparrow Hawk.—Reports of predatory birds found dead or dying of tremors in areas that have been sprayed with pesticides are not uncommon. Observations of apparent pesticide poisoning of predatory birds in the Detroit area led to the analysis of a number of these for possible DDT contamination. However, the results of these analyses were not conclusive (Wallace, Nickell, and Bernard, *Cranbrook Inst. Sci., Bull.*, 41: 20-22, 1961).

During March of 1961, while carrying out experiments on ingestion and accumulation of DDT in House Sparrows (*Passer domesticus*), I fed contaminated sparrows to an adult male Sparrow Hawk (*Falco sparverius*), which died in tremors after consuming parts of nine sparrows within five days. The Sparrow Hawk was originally obtained as a nestling in June of 1960 from a nest site in Detroit, Michigan. It was raised on beef liver and beef kidney.

Considering that the average weight of the sparrows was 25.8 g and that the brain, heart, liver, and part of the breast muscle of each sparrow were removed for analysis prior to being fed to the Sparrow Hawk, it becomes evident that the hawk died after the ingestion of less than 200 g of contaminated food.

Following this, the brain, heart, liver, and breast muscle of the Sparrow Hawk were removed and analyzed for DDT in accordance with the Schechter-Haller method as prescribed by the Association of Official Agricultural Chemists (*Off. Meth. of Anal.*, 406-415, 1955). Results of the analysis expressed in parts per million of DDT/g of tissue were as follows: brain, 85 ppm; breast muscle, 76 ppm; heart, 97 ppm; and liver, 212 ppm. These amounts were roughly comparable to those found in corresponding tissues in the sparrows.

Admittedly, this represents an isolated experiment from which little can be concluded, but it does suggest at least two important considerations. First, the results point to the stability of DDT in that it could still be recovered by colorimetric determination after being ingested by the sparrows (on a diet of 300 ppm of DDT in chick starter mash), absorbed, distributed in their tissues, and then the cycle repeated in the Sparrow Hawk without undergoing any noticeable change within the limits of the analytical techniques used. Secondly, the experiment also suggests that carrion feeders as well as birds of prey may possibly ingest lethal amounts of DDT by feeding on dead or dying birds and mammals.

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methods of analysis, and to Dr. G. J. Wallace, of the Department of Zoology, for suggestions concerning the experiment and preparation of this paper.—RICHARD F. BERNARD, *Department of Zoology, Michigan State University, East Lansing, Michigan.*

Wasp Attack on a Flicker.—On 12 July 1961 I investigated a loud sound near my home in Boxford, Massachusetts, and found a female Yellow-shafted Flicker (*Colaptes auratus*) on the ground near the entrance to an underground nest of yellow jacket wasps (*Vespula*). The bird was lying with wings outstretched and was screeching loudly. Its eyes were half closed, and its wings were twitching slightly. Crawling over it were approximately 50 wasps, while many more were flying around it. Although the wasps were attempting to sting the bird, the only obvious evidence that any had succeeded was a swelling of the lower lid of the right eye. The flicker seemed completely helpless and unable to move away from the wasp nest.

By making a small smudge fire, I was able to pick up the bird and carry it away from the wasps. I examined the flicker carefully, but, aside from the swollen eyelid, there was no apparent injury of any kind. It lay quietly at first and stopped screeching after a few minutes. After about one hour, it seemed to revive suddenly and began to struggle vigorously, so I took it to a wooded area where I released it. Although its movements were still somewhat uncoordinated, it seemed almost ready to fly. I left it alone, and when I returned a few minutes later it was gone.—STEWART DUNCAN, *Biology Department, Boston University, Boston 15, Massachusetts.*

Predation on Peregrines by Ringtails.—From what has been written on the Peregrine Falcon (*Falco peregrinus*), most students of this species (Hickey, *Auk*, 59: 176–204, 1942; Bond, *Condor*, 48: 101–116, 1946; Ferguson-Lees, *Bird Notes*, 24: 309–314, 1951) list man as the principal predator. F. L. Beebe (*Condor*, 62: 145–189, 1960) notes some avian predators for the Pacific coast, namely ravens, crows, and eagles. Other writers seem to agree with Beebe in this respect, with the Golden Eagle being mentioned most often. Aside from man, known mammalian predators are uncommon over most of the range of the Peregrine in North America. Cade (*Univ. Calif. Publ. Zool.*, 63 (3), 151–290, 1960), however, lists the timber wolf, red fox, and Arctic ground squirrel as predators on Peregrines in Alaska. He also suggests several other possible mammalian predators.

During the summer of 1961, while studying Peregrine Falcons, a different case of predation was noted. On the morning of 7 July two Peregrines, about 28 days old, were found dead in an eyrie. They were so freshly killed that the exposed meat was still moist. The back, portions of the thoracic organs, and parts of the neck and wings of each had been eaten. This suggested a mammalian predation. Furthermore, the Peregrines had been dragged to a ledge adjacent to the eyrie, and all along the ledge there were fresh scats. These were determined to be those of a Ringtail (*Bassariscus astutus*). The eyrie was located about 23 meters (70 feet) from the top of a 130-meter (400-foot), smooth, vertical, Navajo Sandstone cliff and was seemingly inaccessible to mammals, yet the Ringtail had found access somehow to the nest. Ringtails are notorious climbers, and probably were assisted by some obscure crack. This mammalian predation was in marked contrast to the cases discussed by Cade (*op. cit.*, 187) where the Peregrine eyries were easily preyed upon by mammals because of their location on the ground and in low situations.—CLAYTON M. WHITE and GARY D. LLOYD, *Department of Zoology, University of Utah, Salt Lake City, Utah.*