

returned to the scale and was weighed with the net minus the bird. This weight was then subtracted from the original recording to give the weight of the bird. Sexes are noted where known.

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| Andean Condor, <i>Vultur gryphus</i> , ♂               | 11.5 kg |
| King Vulture, <i>Sarcoramphus papa</i> , ♀             | 3.0 "   |
| Harpy Eagle, <i>Harpia harpyja</i> , ♂                 | 4.6 "   |
| Crowned Eagle, <i>Stephanoaëtus coronatus</i> , ♂      | 3.4 "   |
| Martial Eagle, <i>Polemaëtus bellicosus</i> , ♀        | 6.2 "   |
| Verreaux's Eagle, <i>Aquila verreauxii</i>             | 3.8 "   |
| White-tailed Sea Eagle, <i>Haliaëtus albicilla</i> , ♀ | 6.5 "   |
| Hooded Vulture, <i>Aegypius monachus</i>               | 7.5 "   |
| Pondicherry Vulture, <i>Sarcogyps calvus</i>           | 4.2 "   |
| Vulturine Sea Eagle, <i>Gypohierax angolensis</i>      | 1.7 "   |
| Bateleur Eagle, <i>Terathopius ecaudatus</i>           | 2.5 "   |

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***Stegophorus stellae-polaris* (Acuardiidae: Nematoda) in the Pacific Fulmar.**

—On 12 November 1961 the writer found an adult, male dark-phase Fulmar, *Fulmarus glacialis rogersii*, on Pescadero Beach, San Mateo County, California. The bird was dead, but intact and in fresh condition; death must have occurred shortly before the specimen was washed ashore and recovered. The cause of death could not be determined. A neck dislocation suggested the possibility of an in-flight collision with some obstacle; but wave action may have caused this injury after death. The feathers, particularly about the head, were swarming with Mallophaga (chewing lice), which have been identified as *Perineus nigrolimbatus*, *Procellariophaga brevifimbriata*, and *Saemundssonina occidentalis* (a few specimens). These species are common ectoparasites of the Pacific Fulmar (Hopkins and Clay, *A Checklist of the Genera and Species of Mallophaga*, British Museum, London, 1952).

The bird was dissected on the day of recovery. During the skinning process four small nematodes were collected as they emerged from the nostrils, waving about as though in search of a new host; 38 more specimens of the same worm were removed from the lower esophagus and proventriculus. The worms lay in the mucosal secretions but were not attached to the mucosa. The mucosa were healthy and intact; there was no evidence that the parasites were pathogenic for this particular host. Careful dissection failed to reveal any other helminths, either intestinal or extraintestinal. Heart blood films were negative for haematozoa.

The nematodes (25 female specimens ranging in length from 12.0 to 16.8 mm, and 17 males from 5.1 to 7.9 mm) conform in all morphologic and mensural respects to the descriptions of *Stegophorus stellae-polaris* (Parona, 1901), Wehr, 1934 (Wehr, *J. Wash. Acad. Sci.*, 24: 341-347, 1934; Baer, *Medd. Grønland*, 124: 1-55, 1956). This parasite has been recorded from the Atlantic Fulmar, *Fulmarus glacialis glacialis*, from the following localities: "arctic region" of the North Atlantic (Parona, *Boll. Mus. Zool. Univ. Torino* (393), 16: 1, 1901); North Sea (Baylis, *Ann. Mag. Nat. Hist.*, ser. 10, 1: 329-343, 1928); 61.00° N, 32.10° W (Wehr, 1934); Jan Mayen Island (Bird and Bird, *Ibis*, Ser. 13, 5: 837-855, 1935). It has also been recorded from the Storm Petrel, *Hydrobates pelagicus* (Baylis, 1928—Norfolk, England) and from Brünnich's Guillemot (Murre), *Uria lomvia lomvia* (Wehr, 1934—73.20° N, 17.25° W; 72.00° N, 13.30° W). *S. stellae-polaris* does not, however, appear to have been recorded previously from the Pacific Fulmar or from any other North Pacific bird.

*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.

Thanks are due to Miss Mary Ellsworth for providing the hawk for the experiment, to Dr. E. J. Benne, of the Department of Biochemistry, for his helpful advice on