Migratory Animal Pathological Survey

Principal Investigator: H. Elliott McClure, Ph.D.

OBJECTIVE: The objectives of the MAPS program as set out in the original proposal of 1963 was to learn the migration routes of birds of East Asia, the ectoparasites that were harboured on the birds and the haematozoa which infected birds as correlative data for use by epidemiologists interested in the dispersal and periodic occurrence of human infections, especially the arthropod borne viruses and rickettsias.

BACKGROUND: In October 1973 the Migratory Animal Pathological Survey activity was closed and all of the files and library moved from the Applied Scientific Research Corporation of Thailand (ASRCT) to the SEATO Medical Laboratory. A final report on the study of bird migration in Eastern Asia has been completed and published in book form (1). The first quarter of the year was devoted to proof reading and composition of the book which came off the press in June. More than 1,000 copies were mailed to ornithologists and libraries throughout the world and there has been a steady demand for copies ever since.

This report summarized the results from the banding of more than 1,200,000 birds of 1,218 species in ten countries of Eastern Asia; India, Thailand, Malaysia, Indonesia, Philippines, Taiwan, Hong Kong, Japan and Korea. There were more than seven thousand recoveries from these birds and their movements demonstrated that there were four major flyways across Asia, the studies being made in the East Asian and Indo—Asian flyways. The other two flyways are the Eastern European and Western European. Within these four flyways are numerous migration routes related to species and populations. Most species or populations remained in a given flyway without much overlap to adjacent ones. A given species with a wide distribution may have populations restricted to certain flyways and migration routes. Other information arising from these studies demonstrated that there was migration within the temperate zone and limited to it, migration within the tropics and limited to it, nomadism, altitudinal migration, and local dispersion as well.

Survival among the birds followed patterns already demonstrated in Europe and North America. Juvenile mortality is 60% or more until they gain experience. Following the first year survival rises until 75% or more live through each succeeding year. Data from Malaysia where there was a long term survival study indicated that many species were long lived, even tiny sunbirds which were still alive and active at 12 years.

PROGRESS: The work of MAPS was divided into three phases; bird migration, ectoparasites, and avian haematozoa. Summary of the ectoparasite studies appeared in book form in 1973 (2). During the remainder of 1974 much time was devoted to the preparation of a report on the haemotozoa studies. These had involved the examination of more than 50,000 blood films from 1,147 species which had been completed before the project was closed at ASRCT. Summary, analysis, and revision are still underway and it is expected that the volume will be completed in 1975 or 1976 to make up the third report from this extensive study in Asia.

In the meantime recovery records continue to come in from hunters and bird students in Eastern Asia gradually increasing our knowledge of the survival of birds. Many species have now passed 10 years.

REFERENCES:

1. McClure, H.E.: Migration and Survival of the Birds of Asia, Bangkok: U.S. Army Component, SEATO Medical Research Laboratory, 1974, p 476.
2. McClure, H.E. and Ratanaworabhan, N.: Some Ectoparasites of the Birds of Asia, Bangkok: Applied Scientific Corporation of Thailand, 1973, p 219.