as to whether Fall and Spring populations of Swainson's Thrushes passing through Almirante are distinct with quite different migratory patterns and whether the Spring migration of Gray-cheeked Thrushes takes place through a different flyway than that utilized during the Fall.

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Gorgas Memorial Laboratory, Apartado 6991, *Panama, Republic of Panama*

A NEW METHOD OF CAPTURE UTILIZING THE MIST NET

By J. E. JOHNS

During the Spring of 1961, it became necessary for me to capture alive a number of Wilson's Phalaropes (*Steganopus tricolor*) for the purpose of laboratory investigation of specific phenomena related to the well known sex reversal which these birds exhibit behaviorally and morphologically. These investigations were conducted at the University of Montana, and were supported by NSF Grant 678-3.

Since a minimum of 40 experimentals were required, and since Wilson's Phalaropes arrive in the Missoula, Montana area relatively late in Spring (earliest record May 3) and depart a short time later (except stragglers July or August), grassy ponds in the National Bison Range north of Missoula, which were known to harbor these birds during the breeding season were selected in advance as working sites.

It was decided that the method of capture most likely to meet with success would be by means of Japanese mist nets. These were stretched vertically on poles in shallow water along the edges of ponds in which birds were often seen to feed. Other nets were placed between adjacent ponds. It soon became apparent, however, that

Fig. 1 and Fig. 2

A. 2″ x 2″ stake driven into mud of pond bottom in selected site. (At least 3′ of stake protrudes above water surface).

B. Metal ring attached by cord to state (A) through which cord (C) from corner of mist net is passed.

C. Line attached to corner of mist net passed through metal ring (B) and attached to line (F).

D. Nylon mist net held parallel to and approximately 30″ above pond surface.

E. Lead split shot attached to all edges of mist net (D).

F. Single line attached to 4 corner lines (C) and leading to place of concealment.

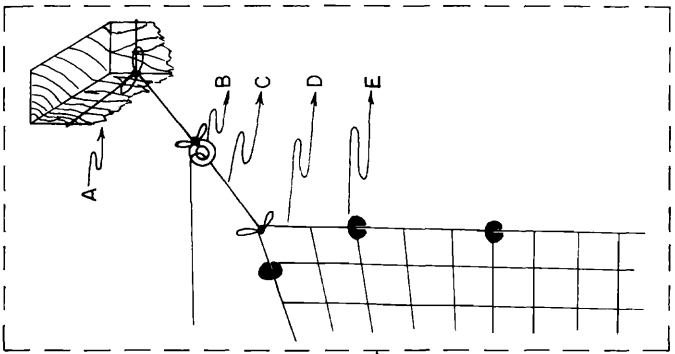

FIG. 2

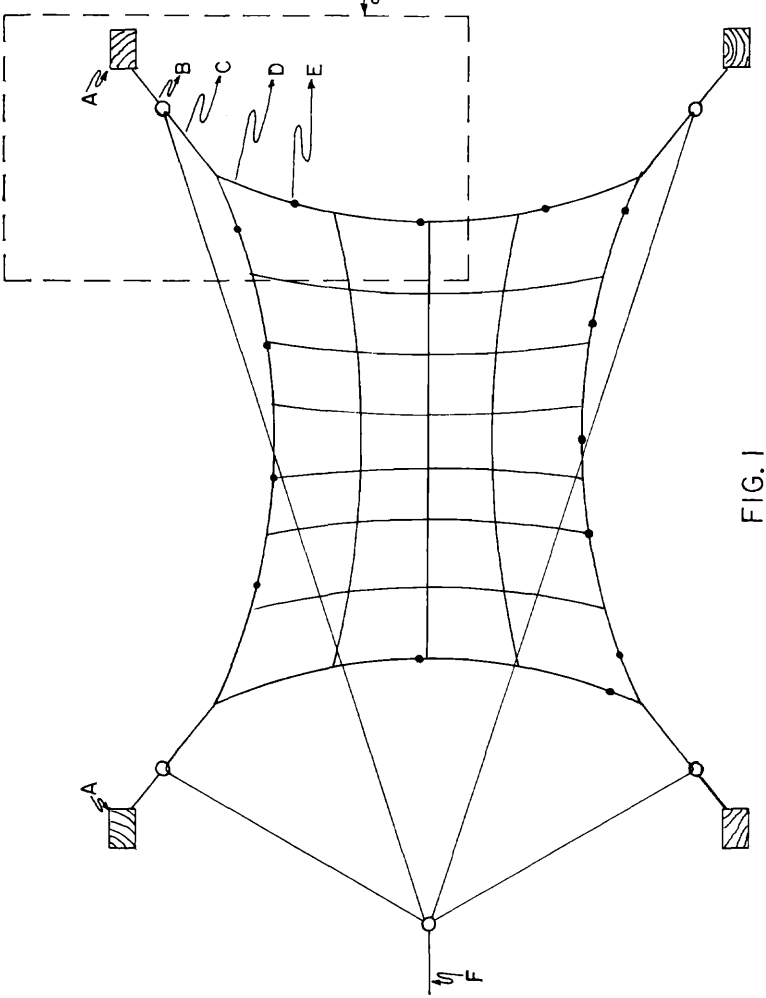

FIG. 1

Fig. 3 General aspect of net in position
Fig. 5 Mated pair of phalaropes

Fig. 4 Carefully disentangling a pair of Wilson's phalaropes
Fig. 6 Author cleaning net after use

the eyesight and maneuverability in flight of phalaropes was such that they seldomly struck the net. Although numerous other avian species were caught in numbers, phalaropes flew over, under, and around the net, and only rarely became entangled. Several moves and varied net colors produced no better results.

The observation that, when these nets were stretched over shallow water with the lower edge above the water, phalaropes would swim under them with no apparent fear, led to the adaptation of the mist net into a highly successful method of capture for shorebirds of all types. The following photographs and diagrams illustrate the simple modification by which I was enabled, without net damage, to selectively capture phalaropes on ponds densely inhabited by other larger avian species which often damage fine gauge nets used to capture smaller birds. It is probable that this method could be of some assistance to other investigators of specific avian problems, and for this reason I have written the following detailed explanation of the method.

Since Japanese mist nets are designed for vertical use (i.e. as a tennis court net) they are manufactured with voluminous longitudinal "pockets." In order to facilitate their use in a position parallel to the ground as Figs. 1 and 2 illustrate, it is desirable to flatten these pockets by cutting and lenthening the strong cords which are threaded through the net along the edges.

Although experience has shown that a wide selection of net sizes may be used with success, nets of approximately 40' length have proven to be easy to work with as well as of adequate size. Larger nets tend to sag in the middle, while much smaller ones don't cover the pre-selected trapping area as adequately.

In erection, the net should be stretched tight about two feet above the water (see fig. 6). The net at this height seems to cause little or no fear among wading birds and is sufficiently low to catch the swiftest riser. If wading birds are to be caught, it is helpful to place one end of the net over land, and the other end over water. Since shorebirds often feed by following along the edges of ponds, by this placement they may then be captured on land at the pond's edge, or wading in the shallow water near shore. The method requires a water surface fairly free of emergent or floating vegetation as otherwise the mesh becomes tangled and is difficult to clean.

Special attention should be paid to see that the lines attached to the corners of the net (fig. 2, C) pass freely through the metal rings (B). This assures rapid and even net descent when line (F) is released. In addition, "split shot" lead weights (E) are attached along the edges of the net at regular intervals. These cause the edges to fall faster than does the center, without which the swifter birds are sometimes able to escape before the net edges are on the ground (or water).

If it becomes necessary to leave the net in place overnight, line (F) may be attached to a small stake (G) or to some convenient bush. Although I have, on a number of occasions, left nets in place unattended for several days, upon return I have never found an accidentally entangled bird.

With the net in place it is necessary then only to wait near stake (G) until the desired birds pass beneath the net where they may be captured by releasing line (F). Often the capture may be speeded by cautiously herding them toward the net, however, this is accomplished most satisfactorily by an assistant and is not usually necessary. Once caught, small wading and swimming birds should be disentangled swiftly since the weight of the net may soon drag their heads under water.

The above method has certain inherent disadvantages which precludes its use for capture of large numbers of birds for banding purposes, however, its advantages for selective capture, in small numbers, of specific species is apparent and, as in my own case, it has proven to be an inexpensive and simple method for ensuring capture of desired laboratory animals.

Montana State University, Missoula, Montana

A PLASTIC WING TAG FOR INDIVIDUAL IDENTIFICATION OF PASSERINE BIRDS

By Albert E. Hester

Movements of passerine birds in local areas may be studied by the use of numbered plastic wing tags. This unique method of banding enables ornithologists to identify individual birds in the field and thereby facilitate studies of population dynamics and movements.

The standard method for individual identification of passerine birds has been the use of colored leg bands (Butts *in* Hickey, 1943). By this technique, however, the bird must be seen at close range; thus, some of the banded birds may be missed even in intensive studies and only the investigators are likely to obtain information from sighting these birds. Imping of feathers may be done to identify individuals (Wright, 1939), but the method is time consuming, allows few combinations and observations are limited to the investigators in order to obtain reliable information. Dyeing methods (Wadkins, 1948) may also be used but they, too are time consuming, allow few combinations and are of use only between molts. "Back-tagging", a method of attaching a visual marker over a bird's back, has been used to identify gallinaceous birds (Blank and Ash, 1956, and Labisky and Mann, 1962). I found backtags on starlings (*Sturnus vulgaris*) to be inadequate after several experiments were conducted using these birds as subjects. The same would probably be true of other passerine birds. The chief difficulties were (1) the backtags were difficult to attach properly to birds of this size, (2) they interferred with flight if large enough to have numbers painted on them, and (3) this method of banding was too time-consuming when working with large numbers of birds. Plastic wing tags in different color combinations were first used by Knowlton, Michael and Glaz-