

NOTES AND NEWS

Computer Program for Analyzing Bird Banding and Recovery Data.—A computer program has been developed for the computation of great circle distances and compass directions from one point to another on the earth's surface. The input data are the latitudes and longitudes of the points, according to the U.S. Fish and Wildlife Service and Canadian Wildlife Service data format. For any grouping of such distance and direction data, the program also computes the mean distance and direction, the latter by the method appropriate for circular data. Measures of dispersion are also given, as is a statistical test (the Rayleigh test) for a "preferred" mean direction, and other quantities useful for other statistical analyses. Geographic location between 19 and 59° N latitude and between 52 and 125° W longitude may be printed on a rectangular coordinate system 8.0×12.1 in (20.3×30.7 cm) in size, with an indication of the frequency of data at each plotted point. This coordinate system is such that a transparent overlay of a U.S. Army map of this portion of North America may then be placed atop the computer printout. A detailed description of the program is available at no charge from its developers: JERROLD H. ZAR AND WILLIAM E. SOUTHERN, *Department of Biological Sciences, Northern Illinois University, DeKalb, IL 60115*. Copies of the source program and/or deck (in FORTRAN IV) may be obtained, at cost, from the Department of Computing Services, Northern Illinois University.

Colonial Waterbird Group Meeting.—The Linnaean Society of New York, as part of its Centennial celebration, will host the Second Annual Meeting of the Colonial Waterbird Group at the American Museum of Natural History in New York City on 21–23 October, 1978. The Linnaean Society will sponsor a Symposium of invited papers on "Factors Affecting Productivity in Colonial Species" on 21 October and the morning of 22 October. Submitted papers for the Colonial Waterbird Group will be given on the afternoon of 22 October and the morning of 23 October. A workshop session the afternoon of the 23rd will conclude the meeting. Please send for information on contributed papers, abstracts for which must be received by 1 August, 1978, to: DR. P. A. BUCKLEY, *North Atlantic Regional Office, National Park Service, 15 State Street, Boston, MA 02109*. Although invited papers will be published, it is not yet certain if submitted papers will also be published in a *Proceedings*. For registration information, please contact Ms HELEN HAYS, *Dept. of Ornithology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024*.

NEBBA MIST NETS

The Northeastern Bird-Banding Association, Inc. imports mist nets from Japan as a service to its members and other netters. Net income has been used to build up the needed working capital, to support indices of *Bird-Banding* reference tools that do not pay their own way fully, and to support research work. The Manomet Bird Observatory, P.O. Box 0, Manomet, Massachusetts 02345, acts as agent for NEBBA in the mist net business.

Most nets are in stock for immediate shipment. We have generally been able to fill orders promptly, but delays may occur for a variety of reasons, such as strikes or customs. If you know your needs in advance, an early order may avoid delay in your netting project.

The prices shown include shipment by surface parcel post within the U.S. If desired, we can ship by parcel post "special delivery" or "special handling" or air parcel post, at the actual extra cost. We make every effort to deliver by desired dates, but some requests are unrealistic, even to the point of asking for a date earlier than the day the order reaches us. Requests should keep in mind the limitations of the postal service.

For shipment outside the U.S. we charge the actual postage. On any shipment outside the U.S., the purchaser (1) arranges any import license or other formalities; (2) pays any custom duties or other charges levied by his country; and (3) pays for the net order in advance and then will be invoiced for postage separately.

We regret that we cannot ship by other methods, such as United Parcel Service or Air Freight, partly because we have no convenient way for shipments of that sort to be

picked up. Also, the light weight of nets makes parcel post the most economical method in most cases. Note that we do not ship via freight forwarders or consolidators.

Massachusetts customers should allow for the state sales tax (currently 5%) unless exempt for charitable, educational or governmental reasons. Sales are not subject to local sales taxes outside Massachusetts, inasmuch as NEBBA has no premises or operations outside Massachusetts for the sale of nets.

If any invoice other than the standard NEBBA forms is required, this must be specified at the time of the order, and a set of the forms provided. New members or subscribers may include payment in the same check as for the nets.

PRICES OF NEBBA MIST NETS

Net Type	Price 1	Price 2
ATX	\$10.70	\$14.30
CTX	9.90	13.20
DTX	5.90	7.90
ETX	10.50	14.00
FTX	13.85	18.40
GTX	7.55	10.00
HTX	11.95	16.00
JTX	6.60	8.80
KTX	11.95	16.00

Price 1: Cash with order.

Price 2: All orders that are not prepaid.

Buyers who do not include payment with their order may claim a 10% discount on orders of 10 or more nets if payment is made within 30 days of the Invoice date.

Members please note that there is no longer a special members' discount. Instead, please consider the savings possible by making payment with your order.

Please make checks payable to NEBBA or to the Northeastern Bird-Banding Association, Inc.

Permits to band birds in the U.S. or Canada do not authorize the use of nets unless the permit is specifically endorsed.

PLEASE SHOW THE APPLICABLE PERMIT NUMBER ON EVERY ORDER.

Institutions ordering by purchase order should always show the individuals who will be responsible for use of the nets. NEBBA sells nets only for scientific purposes, to individuals or institutions that appear qualified to use them. We will decline sales to anyone whose qualifications appear inadequate or unproven. Nets will not be sold for purposes such as control of the numbers of birds, or for commercial collecting.

DESCRIPTION OF NEBBA MIST NETS

All NEBBA mist nets are black, the best grade we can obtain in Japan. All are tethered and have nylon mesh and nylon shelfstrings (except that type KTX is made of teteron—a polyester—instead).

Type	Length (meters)	Height (meters)	Shelves	Mesh (mm)	Denier
ATX	12	2.6	4	36	70
CTX	12	2.6	4	61	110
DTX	6	2.6	4	36	70
ETX	12	2.6	2	121	210
FTX	12	2.6	4	24	70
GTX	6	2.4	4	24	70
HTX	12	2.6	4	30	70
JTX	6	2.6	4	30	70
KTX	12	2.6	4	36	75

Height: as designated by the manufacturer (the user can vary the height of the top shelfstring from the ground somewhat, and must allow some slack in order to form shelf pockets).

Mesh: figures are "stretched."

Denier: weight of thread (lower numbers show a lighter thread). All yarn is two-ply, except 210 denier which is four-ply.

CHOICE OF MIST NET TYPES

Although the choice of types is a matter of personal preference to some extent, some general guides may be outlined.

First, determine the best size of mesh for your purposes, depending on the species to be captured. No one size of mesh can be efficient for all sizes of birds; outside the proper range of size, the net may be inefficient or tangled, or the bird may damage the net.

24 mm: specialty size, for kinglets, titmice, or the smallest wood warblers.

30 mm: recommended for wood warblers in general. The line of peak efficiency between this and 36 mm falls between birds taking U.S. band size 1 or less (30mm) and those taking 1B or larger (36mm). See "The Comparative Efficiency of 30 and 36 mm Mesh in Mist Nets" by Mary A. Heimerdinger and Robert C. Leberman, *Bird-Banding*, **37**: 280-286, 1966.

36 mm: the general-purpose size for small birds (see discussion above under 30 mm).

61 mm: the largest thrushes, doves, woodcock, grackles, medium-sized shorebirds.

121 mm: grouse, large shorebirds, small to medium-sized ducks and hawks.

Next, consider net length. Use 12-meter types if you have the space, and 6-meter types generally only where space is limited.

Unless you are deliberately preparing for difficult conditions, your choice of mesh should be consistent in different net lengths. For example, if you are ordering primarily type ATX, any 6-meter net ordered should be DTX, not GRX or JTX.

Net orders or inquiries should be directed to: MIST NETS, *Manomet Bird Observatory*, P.O. Box 0, Manomet, MA 02345.