

the species level, including more splits in the passerine species. For instance, a very recent paper suggests that Painted Buntings are two phylogenetic species with allopatric breeding and wintering ranges and different migration and molt strategies.

Probably most species changes to come will be splits rather than lumps, as further use of a variety of biochemical techniques increases our understanding. Adoption of the phylogenetic concept might reverse many of the lumps of the past few years as well as splitting most distinguishable subspecies.

"Eastern and Western" House Finches raise interesting questions. The only apparent evolutionary change which has occurred in their 50-year separation is the ability of the eastern population to disperse. When the populations meet and presumably interbreed, will this trait spread through the presently sedentary western population? Have any detectable biochemical differences occurred in 50 years? Introduced populations such as this offer many opportunities for study of groups which started from a small gene pool, as well as providing a comparison with much older allopatric populations, such as Baltimore and Bullock's Orioles, which have recently had an opportunity to interbreed.

Distribution and Taxonomy is in style a "condensed" version of the AOU checklist format, which is not surpris-

ing since Monroe was a major contributor to that also. Each species is listed by scientific name with an English name, AOU-type number, habitat, range, and any notes on relationships to other species. The extensive table of contents and indices to names and world numbers are complemented by references, maps, and a gazetteer. The only thing missing for banders is a set of four-letter codes!

Monroe's ability to produce this massive project in a very timely fashion with many 1989 and 1990 references is impressive. A systematic method of updating the book would further enhance its usefulness and desirability.

The taxonomic changes in Distribution and Taxonomy suggest many potential study projects for banders. In-hand methods need to be determined to distinguish newly separated species and winter ranges of such species as Brewer's Sparrow and its new sibling the Timberline Sparrow.

The book is recommended highly to all serious students of ornithology. Serious listers will be delighted by the new species as well as a definitive order for their lists. If you can't afford your own copy, talk your local library into acquiring it.

Robert C. Tweit

Recent Literature

BANDING HISTORY AND BIOGRAPHY

A man for all birding seasons/Roger Jones aids raptors any time, any how [sic]. D.L. Kraha. 1990. *Eyas* 13(1):26-27. -c/o Natl. Wildl. Fed., 1400 16th St. NW, Washington, DC 20006-2266 -(Profile of raptor bander of VA and Washington, DC.) MKM

BANDING EQUIPMENT AND TECHNIQUES

Development and evaluation of a technique for individually marking egrets. M. Maddock. 1989. *Corella* 13:133-142. -Faculty of Education, Univ. of Newcastle, NSW 2308, Australia -(A system of 7 color bands used to mark 4 species of egrets in Australia so that non-expert field observers could participate in determining egret movements proved inadequate, as bands were often obscured or became muddy. An alternative system using a mixture of numbers and colors on patagial tags is described in detail, including photographs and application methods. Observations in captivity and in the wild showed minimal loss of tags up to three years and no evidence of effects on survival of Cattle Egrets. Too few Intermediate

Egrets have been sighted to date to provide an evaluation, and too few of the other two species have been tagged. Tagged Cattle Egrets have been seen as far away as New Zealand.) MKM

Rapid band wear in Eared Grebes and other saline lake birds. J.R. Jehl, Jr. 1990. *J. Field Ornithol.* 61:108-110. -Sea World Research Inst., 1700 South Shore Rd., San Diego, CA 92109 -(Band loss may begin in 3-4 years and become severe in 5-6 years. Stainless steel bands are unavailable.) RCT

Total body electroconductivity (TOBEC) to estimate total body fat of free-living birds. G. Castro, B.A. Wunder, and F.L. Knopf. 1990. *Condor* 92:496-499. -Natl. Ecol. Res. Center, USFWS, Fort Collins, CO 80525-1400. -(TOBEC is accurate, does not hurt birds, and is not affected by metal bands.) RCT

Fat scoring: sources of variability. D.G. Krentz and G.W. Pendleton. 1990. *Condor* 92:500-507. -USFWS,

Patuxent Wildl. Res. Center, Laurel, MD 20708. -(Variability among observers is high and varies with species.) RCT

IDENTIFICATION, MOLTS, PLUMAGES, WEIGHTS, AND MEASUREMENTS

Fall weights of Redheads and Ring-necked Ducks in northern Minnesota. R.H. Hier. 1989. *Prairie Nat.* 21:229-233. -Wetland Wildlife Populations and Res. Group, 102 23rd St., Bemidji, MN 56601. -(A drop in mean weights within most age/sex groups since 1953 may reflect habitat deterioration. In both species, mean weights of males were greater than those of females in each age class and mean weights of adults exceeded those of immatures. In Ring-necked Ducks, the difference between mean weight of adults vs. immature males was greater than that of females. Hunter-killed birds averaged heavier than trapped birds.) MKM

Unusual iris colour in White-cheeked Honeyeater. S.G. Lane. 1989. *Corella* 13:161. -Lot 6, Fairview Rd., Moonee, Via Coffs Harbour, NSW 2450, Australia. -(Adult with mid-brown inner iris and light brown outer iris was the first of any age of about 1200 birds of this species handled by the author without a dark brown or blackish-brown iris.) MKM

Determining age and sex of nestling Gyrfalcons. K.G. Poole. 1989. *J. Raptor Res.* 23:45-47. -Wildl. Mgmt. Div., NWT Dept. of Renewable Resources, Yellowknife, NWT X1A 2L9. -(Growth curves are presented for weight and length of seventh primaries of young Gyrfalcons in NWT. Until 11 days of age, age can be approximated by weight through an equation. Growth of the seventh primary of chicks older than 11 days old is essentially linear and can be used to estimate age. Weight gain is more rapid in females than males, providing a method of determining sex of known-aged chicks or chicks whose age has been estimated by length of the seventh primary. The usual complications in using weight data apply.) MKM

Mass variation in breeding Wood Thrushes. R.K. Johnson, R.R. Roth, and J.T. Paul, Jr. 1990. *Condor* 92:89-96. -Dept. of Entomol. & Applied Ecol., Univ. of Delaware, Newark, DE 19717. -(263 thrushes were captured 852 times over 15 years.) RCT

Differences in timing and number of molts for Baltimore and Bullock's Orioles: implications to hybrid fitness and delayed plumage maturation. S. Rohwer and J. Manning. 1990. *Condor* 92:125-140. -Dept. of Zool., Univ. Washington, Seattle, WA 98195. -(Molts are described and differentiated.) RCT

NORTH AMERICAN BANDING RESULTS

Spring records 1982. South central. C. Sexton. 1983.

Newsletter Hawk Migration Assoc. North Amer. 8(1):11-14. -Box 519, Austin, TX 78767. -(An American Kestrel banded in Feb. 1981 at Austin, Texas, was recovered in central Iowa in April 1982.) MKM

Hawk Cliff Raptor Banding Station seventeenth annual report, 1987. B.W. Duncan, D. Fowler, and S. Fowler. 1989. *Ont. Bird Banding* 20/21:44-53. -1049 Kirkwall Rd., R.R. 1, Dundas, Ont. L9H 5E1. -(29,524 diurnal raptors of 14 species were counted and 2633 banded during 1133 hours of station operations from Aug. to Dec. 1987. A graph shows the long-term increase in Turkey Vulture sightings 1973-1987.) MKM

Hawk Cliff Raptor Banding Station band encounters: 1986-1987. S. Fowler and B. Duncan. 1989. *Ont. Bird Banding* 20/21:54-59. -17 Fifth Ave., St. Thomas, Ont. N5R 4C2. -(Details of 44 encounters reported from the Bird Banding Office in 1986 and 31 in 1987, with a summary table by species of all 577 encounters of 12 species reported from 1969 through 1987 and percentages (1.0 to 8.7) of each species banded. Notable longevity records of four birds are noted.) MKM

Northern Saw-whet Owl studies at Prince Edward Point in 1988. R. Weir. 1989. *Ont. Bird Banding* 20/21:60-61 (reprinted from *Blue Bill* 35; pp. and year of original not indicated). -294 Elmwood St., Kingston, Ont. K7M 2Y8. -(In the fourteenth year of this owl study, banding was possible on only 13 nights, with 35 lost to unsuitable weather. 204 Saw-whet Owls were banded at Prince Edward Point and 20 more on Amherst Island, bringing the cumulative total to 4875. Two previously banded Saw-whet and one Barred Owl were also caught.) MKM

Results of the banding and relocation program for raptors trapped at Pearson International Airport Toronto 1984 to 1988. M. Wernaart and W.D. McIlveen. 1989. *Ont. Bird Banding* 20/21:62-64. -R.R. 2, Campbellville, Ontario L0P 1B0 -(In five years, 504 birds were trapped, relocated, banded and released. Weights and wing chords of Red-tailed Hawks are graphed by month. 25 birds (5%) were retrapped by April 1988. Unfortunately, three important tables are missing from the paper.) MKM

Activities at Beaverhill Bird Observatory 1988 and 1989. S. Jungkind. 1990. *Edmonton Nat.* 18:9-13. -Beaverhill Bird Observatory Soc., Box 4201, Edmonton, Alta. T6E 2T4. -(1034 birds of 57 species were banded in 1988 and 1948 birds of 71 species in 1989, while 44 birds of 11 species banded in previous years were recaptured in 1988 and 52 birds of 13 species in 1989.) MKM

Texas region. J.M. Economidy. 1990. *Hawk Migration Studies* 15(2):64-68. -6100 Bandera, Suite 508, San Antonio, TX 78238-1601. -(The Texas Parks and Wildlife

Dept. banded and color-marked 68 eaglets in Texas before 1989 and 21 more in 1989. They have had 10 confirmed sightings of these birds, four in Texas and one each in two provinces and four other states. Personnel from the University of Texas Science Park caught 127 Peregrine Falcons on Padre Is., of which 58 (45.7%) had been banded previously, all but three at Padre Island.) MKM

Forty-sixth breeding bird census. 158. Coastal scrub. J. Swenson, D. DeSante, and J. Feldman. 1983. *Amer. Birds* 37:85. -Point Reyes Bird Observ., 4990 Shoreline Hwy., Stinson Beach, CA 94970. -(Color banded individuals in the populations of several species provided evidence that their decline could be attributed to an unusually high level of winter mortality.) MKM

Activities of a migrant Merlin during an island stop-over. A. Raim, W.W. Cochran, and R.D. Applegate. 1989. *J. Raptor Res.* 23:49-52. -Ill. Nat. Hist. Surv., Sect. of Wildl. Res., 607 East Peabody Dr., Champaign, IL 61820. -(Activities and prey of female Merlin caught during spring migration and radio-tagged on Loggerhead Key, Florida, were monitored for the following seven days.) MKM

Distribution, density and age structure of Spotted Owls on two southern California habitat islands. R.J. Gutierrez and J. Pritchard. 1990. *Condor* 92:491-495. -Dept. of Wildlife, Humboldt State Univ., Arcata, CA 95521. -(Birds were color banded.) RCT

Wing shape variation and differential timing of migration in Dark-eyed Juncos. C.R. Chandler and R.S. Mulvihill. 1990. *Condor* 92:54-61. -Dept. Biol. Sci., Bowling Green State Univ., Bowling Green, OH 43403. -(Wing shape varied with capture date during fall migration.) RCT

Incidence and determination of double brooding in Wrentits. G.R. Geupel and D.F. DeSante. 1990. *Condor* 92:67-75. -Point Reyes Bird Observ., 4990 Shoreline Hwy., Stinson Beach, CA 94970. -(A color-marked population was studied intensively.) RCT

Seasonal and age-related changes in plasma testosterone levels in Mountain White-crowned Sparrows. M.L. Morton, L.E. Peterson, D.M. Burns, and N. Allan. 1990. *Condor* 92:166-173. -Dept. of Biol., Occidental College, Los Angeles, CA 90041. -(Banded sparrows were studied in the Sierra Nevada.) RCT

Geographic origin of Red-winged Blackbirds relative to rice culture in southwestern and southcentral Louisiana. K.E. Brugger and R.A. Dolbeer. 1990. *J. Field Ornithol.* 61:90-97. -USDA, Denver Wildlife Res. Center, 2820 E. University Ave., Gainesville, FL 32601. -(Banding recoveries indicate that most birds are residents of Louisiana.) RCT

Wintering localities of Cooper's Hawks nesting in northeastern Oregon. C.J. Henny. 1990. *J. Field Ornithol.* 61:104-107. -USFWS Patuxent Wildlife Res. Center, 480 SW Airport Rd., Corvallis, OR 97333. -(Four hawks were recovered in western Mexico.) RCT

Population genetics and gene flow of the Common Tern. S.L. Burson III. 1990. *Condor* 92:182-192. -Dept. of Biol. Sci., Dartmouth College, Hanover, NH 03755. -(Blood samples were collected as terns were banded.) RCT

Habitat movements and roost characteristics of Montezuma Quail in southeastern Arizona. M.R. Stromberg. 1990. *Condor* 92:229-236. -Hastings Reserve, 38601 E. Carmel Valley Rd., Carmel Valley, CA 93924. -(Locating and capturing birds was extremely difficult. Captured birds were marked with patagial tags, and some were fitted with backpack radios.) RCT

Alloparenting at an Eastern Screech-Owl nest. D.G. Smith and E. Hiestand. 1990. *Condor* 92:246-247. -Biol. Dept., Southern Connecticut State Univ., New Haven, CT 06515. -(A radio-marked, rehabilitated male helped feed young at an active nest.) RCT

Male philopatry in Mallards. J.O. Evrard. 1990. *Condor* 92:247-248. -Wisconsin Dept. of Nat. Resources, Box 61, Baldwin, WI 54002. -(Males were marked with nasal saddles.) RCT

Some nest polygyny in the Barn Owl. C.D. Marti. 1990. *Condor* 92:261-263. -Dept. of Zool., Weber State College, Ogden, UT 84408. -(A banded population was studied.) RCT

Individual contributions to cooperative nest-care in the Acorn Woodpecker. R.L. Mumme, W.D. Koenig, and F.A. Pitelka. 1990. *Condor* 92:360-368. -Mus. of Vert. Zool., Univ. of Calif., Berkeley, CA 94720. -(A color-banded population was studied.) RCT

Comparison of roost use by three species of communal roostmates. D.W. Morrison and D.F. Caccamise. 1990. *Condor* 92:405-412. -Dept. of Entomol., Cook Coll., Rutgers Univ., New Brunswick, NJ 08902. -(Radio-tagged birds were studied.) RCT

FOREIGN BANDING RESULTS

The Spanish Imperial Eagle *Aquila adalberti* C.L. Brehm 1861 in Donana National Park (south west Spain): a study of population dynamics. M. Ferrer and J. Calderon. 1990. *Biol. Conservation* 51:151-161. -Estacion Biol. de Donana, Avenida de Maria Luisa S/n, Pabellon de Peru, 41013, Sevilla, Spain. -(Band recoveries offer support for the belief that the Donana population

of this endangered species is isolated geographically. Recoveries indicate a high rate of mortality up to five years, after which life expectancy is high, with one bird known to have attained 21 years 5 months.) MKM

Neotropical raptors and deforestation: notes on diurnal raptors at Finca el Faro, Quetzaltenango, Guatemala. J.P. Vannini. 1989. *J. Raptor Res.* 23:27-38. - Fundacion Interamericana de Investigacion Tropical, Avenida La Reforma 8-60, Oficina 1104, Zona 9, Guatemala City, Guatemala. -(Mist nets were responsible for two birds caught and several others attracted to the sounds of those caught.) MKM

Starvation of Curlew *Numenius arquata* chicks. D.W. Yalden and P. E. Yalden. 1989. *Wader Study Group Bull.* 56:15. -Dept. Environ. Biol., The University, Manchester, UK M13 9PL. -(As demonstrated by banded chicks later recovered by a dog.) MKM

The status of waders in Bulgaria. D. Nanikov. 1989. *Wader Study Group Bull.* 16-25. -Inst. of Zool., Bulgarian Acad. of Science, Bowl. Rouski 1, 1000 Sofia, Bulgaria. -(Recoveries in Africa and Asia of several shorebird species banded in Bulgaria and recoveries in Bulgaria of birds banded elsewhere show the origins of birds migrating through or wintering in Bulgaria. Banding has also indicated duration of stay of some species in Bulgaria, and site fidelity from year to year of migrant Redshanks. One recovery in Bulgaria was of a Ruff banded 9 years earlier in Norway.) MKM

Waders, wind and water: the north-west Australian wader expedition 1988. J. Clark and N. Clark. 1988. *BTO*

News 157, reprinted in *Wader Study Group Bull.* 56:26-27, 1989. -c/o Wader Study Group, Box 247, Tring, Herts. HP23 5SN, U.K. -(Results of a banding expedition in which 6000+ shorebirds of 24 species were banded, including 300 Broad-billed Sandpipers in one evening. Two birds banded elsewhere were recovered: a Bar-tailed Godwit banded in Hong King and a Terek Sandpiper banded at an unknown location with a Japanese band.) MKM

Red Knot *Calidris canutus rogersi* in Australia. Part 2. Biometrics and moult in Victoria and north-western Australia. M. Barter, A. Jessop, and C. Minton. 1988. *Stilt* 13:20-27 & 1989. *Wader Study Group Bull.* 56:28-35. -21 Chivalry Ave., Glen Waverley, Victoria 3150, Australia. -(Based on 1450 knots captured from 1978 to 1988, with data on biometrics, primary and breeding plumage molt, age structure, longevity and site fidelity.) MKM

Population dynamics of the Wood Thrush in southern Veracruz, Mexico. K. Winker, J.H. Rappole and M.A. Ramos. 1990. *Condor* 92:444-460. -Dept. of Ecol. & Behav. Biol., Univ. of Minnesota, 10 Church St., SE, Minneapolis, MN 55455. -(Wood Thrushes were banded and some were radio marked.) RCT

Social system and helping behavior in the White-banded Tanager (*Neothraupis fasciata*). M.A.S. Alves. 1990. *Condor* 92:470-474. -School of Mol. & Biol. Sci., Univ. of Stirling, Stirling FK9 4LA, Scotland. -(Tanagers were color banded.) RCT

MKM = Martin K. McNicholl

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News, Notes, Comments

AN INVITATION TO THE BIRD BANDERS OF NORTH AMERICA TO CONTRIBUTE TO THE MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP (MAPS) PROGRAM

The Institute for Bird Populations extends an invitation to North American bird banders to become part of the Monitoring Avian Productivity and Survivorship (MAPS) program--a cooperative, continent-wide network of constant-effort, mist-netting stations for the long-term monitoring of landbird productivity, survivorship and population levels. It is becoming increasingly apparent that Earth's biosphere, and its landbird populations, are facing a growing number of environmental threats of ever increasing severity. Many of these threats are truly global in nature: habitat loss, climate change, loss of stratospheric ozone, and toxic pollution. Indeed, a number of large-scale, long-term biomonitoring programs for landbirds are already in place on this continent including the Breeding Bird Survey, the Breeding Bird Census and Winter Bird

Population Study, and the Christmas Bird Count. These efforts all provide annual estimates of population trends for landbirds. Many of the resulting trends indicate serious population declines in many species, especially forest-inhabiting neotropical migrant species in eastern North America. All of these efforts, however, fail to separate the effects of productivity (birth rate effects) from the effects of survivorship (death rate effects). Without these critical data, it is impossible to test hypotheses to account for the observed population changes. Clearly, the need for a continuing and comprehensive program of demographic monitoring through constant-effort mist netting is justified.

Here is where the efforts of banders like us can aid enormously. By banding and recapturing in subsequent years the individual birds that we encounter, we can accumulate data on the population size and survivorship of the birds. By accurately ageing each individual, we can accumulate data on the numbers and proportions of young birds captured and thus on the productivity of the birds.