

RETURNS AND RECOVERIES OF BANDED NORTH AMERICAN BIRDS IN PANAMA AND THE TROPICS

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The phenomenon of North American migratory birds returning in subsequent years to essentially the same winter quarters in the American tropics has been repeatedly demonstrated by banding return records. Nickell (1968) summarized the records then known to him, involving 26 species. Since that time, at least eight additional papers have been published on winter returns to the American tropics. Meanwhile, I have accumulated numerous unreported banding returns for Panama which are presented in this paper. Together, all records known to me involve a total of 44 species of North American migrants shown by banding to return to the same tropical winter quarters in subsequent years.

Given the very minimal amount of bird banding that has taken place south of the United States, these records indicate that "homing" to tropical winter quarters (or at least the same general area) is a regular and significant activity of many migratory species. This subject certainly demands more attention than has heretofore been given, and it underlines the fact that ornithologists know very little about boreal-breeding migratory species for the five or more months of each year when they are out of sight of North American birdwatchers.

There follows first an account of my unpublished migratory bird returns to Panama, as well as foreign recoveries of birds banded in Panama or of birds banded in the United States and recovered in Panama. Thereafter, a summary is presented of all records known to me of North American migrant returns to tropical winter quarters. In this summary, each species listed is followed by the country (or countries) for which there are banding returns. Each country name is followed by one or more sets of paired numbers: the number outside of parentheses indicates the number of breeding seasons intervening between banding and last return; the number within parentheses represents the number of individuals involved. For some Jamaican reports, only a total of birds and a maximum interval between banding and last return were available. Finally, the citation for each country record is given.

NEW PANAMA RETURNS AND RECOVERIES

COMMON SNIPE (*Capella gallinago*). Banded 11 Nov. 1962, Almirante, Bocas del Toro Prov.; recovered Dec. 1967 at San Juan de Chaparra, Oriente Prov., Cuba, by Sr. H. F. Pena.

SWAINSON'S THRUSH (*Catharus ustulata*). Banded by J. N. Waykoff, near Battle Creek, Mich., 14 Sept. 1965; recovered 5 Apr. 1967 at Cerro Punta, Chiriqui Prov.

Banded 13 Oct. 1965, Almirante, Bocas del Toro Prov.; recovered 21 Sept. 1966, 2 mi NW of Monticello, Ill., by R. R. Graber (a television tower kill).

RED-EYED VIREO (*Vireo olivaceus*). Banded 19 Sept. 1963, Almirante, Bocas del Toro Prov.; recovered 10 Sept. 1966 at Dauphin Island, Ala., by M. E. Miller.

PHILADELPHIA VIREO (*Vireo philadelphicus*). Banded 2 Apr. 1967, Cerro Punta, Chiriqui Prov.; returned 1 Mar. and 19 Dec. 1970.

Banded 2 Mar. 1968, Cerro Punta; returned 21 Dec. 1968 and 28 Dec. 1969.

Banded 28 Dec. 1968, Cerro Punta; returned 1 Jan. 1970.

Banded 16 Dec. 1968, Cerro Punta; returned 17 Dec. 1970.

Banded 30 Dec. 1968, Cerro Punta; returned 29 Dec. 1969 and 1 Mar. 1970.

Banded 23 Mar. 1967, Cerro Punta; returned 1 Apr. 1968.

Banded 19 Dec. 1968, Cerro Punta; returned 31 Dec. 1969.

Banded 5 Apr. 1968, Cerro Punta; returned 19 Dec. 1968.

Banded 27 Dec. 1969, Cerro Punta; returned 19 Dec. 1970.

Banded 6 Mar. 1967, Cerro Punta; returned 31 Mar. 1968.

Banded 16 Dec. 1968, Cerro Punta; returned 28 Dec. 1969.

Banded 30 Dec. 1968, Cerro Punta; returned 1 Jan. 1970.

Banded 1 Jan. 1969, Cerro Punta; returned 29 Dec. 1969.

Banded 27 Mar. 1968, Cerro Punta; returned 19 Dec. 1968.

BLACK-AND-WHITE WARBLER (*Mniotilta varia*). Banded 28 Feb. 1967, Cerro Punta, Chiriqui Prov.; returned 3 Oct. 1967.

Banded 8 Mar. 1967, Cerro Punta; returned 23 Sept. 1967.

Banded 7 Oct. 1967, Cerro Punta; returned 19 Dec. 1968.

TENNESSEE WARBLER (*Vermivora peregrina*). Banded 16 Feb. 1964, Curundu, Canal Zone, returned 19 Jan. 1967.

Banded 17 Dec. 1968, Cerro Punta, Chiriqui Prov.; returned 31 Dec. 1969.

Banded 1 Mar. 1968, Cerro Punta; returned 19 Dec. 1968.

BLACK-THROATED GREEN WARBLER (*Dendroica virens*). Banded 20 Apr. 1968, Cerro Punta, Chiriqui Prov.; returned 2 Jan. 1969.

CHESTNUT-SIDED WARBLER (*Dendroica pensylvanica*). Banded 18 Oct. 1965, Almirante, Bocas del Toro Prov.; returned 23 Oct. 1967.

LOUISIANA WATERTHRUSH (*Seiurus motacilla*). Banded 16 Mar. 1967, Cerro Punta, Chiriqui Prov.; returned 27 Sept. 1967.

KENTUCKY WARBLER (*Oporornis formosus*). Banded 1 Mar. 1967, Cerro Punta, Chiriqui Prov.; returned 15 Mar. 1968.

MOORING WARBLER (*Oporornis philadelphia*). Banded 28 Mar. 1964, Curundu, Canal Zone; returned 2 Apr. 1966.

WILSON'S WARBLER (*Wilsonia pusilla*). Banded 5 Mar. 1967, Cerro Punta, Chiriqui Prov.; returned 18 Dec. 1968.

Banded 25 Mar. 1967, Cerro Punta; returned 16 Mar. 1968.

Banded 4 Mar. 1967, Cerro Punta; returned 31 Oct. 1967.

Banded 4 Mar. 1967, Cerro Punta; returned 21 Apr. 1968.

Banded 12 Mar. 1967, Cerro Punta; returned 20 Apr. 1968.

Banded 23 Mar. 1967, Cerro Punta; returned 30 Sept. 1967.

Banded 21 Dec. 1968, Cerro Punta; returned 1 Mar. 1970.

Banded 26 Mar. 1968, Cerro Punta; returned 24 Dec. 1968.

SUMMER TANAGER (*Piranga rubra*). Banded ca. 15 Oct. 1965, Almirante, Bocas del Toro Prov.; returned 27 Oct. 1967.

Banded 18 Mar. 1967, Cerro Punta, Chiriqui Prov.; returned 19 Dec. 1968.

ROSE-BREASTED GROSBEAK (*Pheucticus ludovicianus*). Banded 6 Mar. 1967, Cerro Punta, Chiriqui Prov.; returned 1 Mar. 1968.

SUMMARY OF RETURNS OF MIGRANTS TO WINTER
TROPICAL QUARTERS

BROAD-WINGED HAWK (*Buteo platypterus*). Panama: 1(1), Loftin et al., 1966, and Eisenmann, 1966.

YELLOW-BELLIED SAPSUCKER (*Sphyrapicus varius*). Belize: 1(1), Nickell 1968.

GREAT CRESTED FLYCATCHER (*Myiarchus crinitus*). Belize: 1(1), Nickell 1968.

YELLOW-BELLIED FLYCATCHER (*Empidonax flaviventris*). Mexico: 1(1), Ely 1973.

LEAST FLYCATCHER (*Empidonax minimus*). Mexico: 1(4), Ely 1973.

OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*). Belize: 1(1), Nickell 1968.

ROUGH-WINGED SWALLOW (*Stelgidopteryx ruficollis*). Belize: 1(1), Nickell 1968.

BANK SWALLOW (*Riparia riparia*). Belize: 2(1), Nickell 1968.

GRAY CATBIRD (*Dumetella carolinensis*). Belize: 1(5), Nickell 1968; Panama: 1(2), Galindo and Mendez 1966.

WOOD THRUSH (*Hylocichla mustelina*). Mexico: 1(2), Ely 1973; Panama: 1(2), Galindo and Mendez 1966.

YELLOW-THROATED VIREO (*Vireo flavifrons*). Belize: 3(1), Nickell 1968.

SOLITARY VIREO (*Vireo solitarius*). Mexico: 1(1), Ely 1973.

PHILADELPHIA VIREO (*Vireo philadelphicus*). Panama: 1(10); 2(3); 4(1), Loftin, *infra*.

BLACK-AND-WHITE WARBLER (*Mniotilta varia*). Mexico: 1(2), Ely 1973; El Salvador: 1(1), 2(1), Thurber and Villeda 1974, 1976; Panama: 1(3), Loftin, *infra*; Jamaica: (10 returns, 25-month maximum interval), Diamond and Smith 1973.

SWAINSON'S WARBLER (*Limnothlypis swainsonii*). Jamaica: (4 returns, 87-month maximum interval), Diamond and Smith 1973.

WORM-EATING WARBLER (*Helmitheros vermivorus*). Mexico: 1(2), Ely 1973; Jamaica: (14 returns, 64-month maximum interval), Diamond and Smith 1973.

TENNESSEE WARBLER (*Vermivora peregrina*). El Salvador: 1(8), 2(1), Thurber and Villeda 1974, 1976; Panama: 1(3), 4(1), Loftin et al., 1967; Loftin, *infra*.

PARULA WARBLER (*Parula americana*). Jamaica: (9 returns, 25-month maximum interval), Diamond and Smith 1973.

YELLOW WARBLER (*Dendroica petechia*). Belize: 1(3), Nickell 1968; El Salvador: 1(3), Thurber and Villeda 1974, 1976.

MAGNOLIA WARBLER (*Dendroica magnolia*). Mexico: 1(2), Ely 1973; Belize: 1(1), 3(1), Nickell 1968; El Salvador: 2(1), Thurber and Villeda 1976.

BLACK-THROATED BLUE WARBLER (*Dendroica caerulescens*). Jamaica: (9 returns, 36-month maximum interval), Diamond and Smith 1973.

TOWNSEND'S WARBLER (*Dendroica townsendi*). El Salvador: 1(2), Thurber and Villeda 1974, 1976.

BLACK-THROATED GREEN WARBLER (*Dendroica virens*). Panama: 2(1), Loftin, infra.

YELLOW-THROATED WARBLER (*Dendroica dominica*). Belize: 1(1), Nickell 1968.

CHESTNUT-SIDED WARBLER (*Dendroica pensylvanica*). Panama: 2(1), 3(1), Loftin et al., 1967; Loftin, infra.

PRAIRIE WARBLER (*Dendroica discolor*). Jamaica: (3 returns, 61-month maximum interval), Diamond and Smith 1973.

OVENBIRD (*Seiurus aurocapillus*). Mexico: 1(2), Ely 1973; Belize: 1(1), Nickell 1968; El Salvador: 1(4), 2(1), Thurber and Villeda 1972, 1974, 1976; Panama: 1(2), 2(2), Loftin et al., 1966, 1967; Jamaica: (9 returns, 48-month maximum interval), Diamond and Smith 1973.

NORTHERN WATERTHRUSH (*Seiurus noveboracensis*). Belize: 1(3), Nickell 1968; Panama: 1(1), Loftin et al., 1966; Jamaica: 1(1), Diamond and Smith 1973; Trinidad: 1(1), Snow and Snow 1960; Venezuela: unspecified, Schwartz 1963.

LOUISIANA WATERTHRUSH (*Seiurus motacilla*). Panama: 1(1), Loftin, infra.

KENTUCKY WARBLER (*Oporornis formosus*). Mexico: 1(3), Ely 1973; Panama: 1(3), 2(1), Loftin et al., 1966; Loftin, infra; Karr 1971.

MOURNING WARBLER (*Oporornis philadelphia*). Panama: 1(2), 2(1), Loftin et al., 1966; Loftin, infra.

MACGILLIVRAY'S WARBLER (*Oporornis tolmiei*). Mexico: 1(1), Ely 1973; El Salvador: 1(2), 3(2), Thurber and Villeda 1972, 1976.

COMMON YELLOWTHROAT (*Geothlypis trichas*). Belize: 1(10), 2(2), Nickell 1968; El Salvador: 1(2), Thurber and Villeda 1974, 1976; Jamaica: (9 returns, 33-month maximal interval), Diamond and Smith 1973.

YELLOW-BREASTED CHAT (*Icteria virens*). Mexico: 1(4), Ely 1973; Belize: 1(5), 2(2), Nickell 1968; El Salvador: 1(1), 2(1), Thurber and Villeda 1972, 1976; Panama: 1(2), 3(1), Loftin et al., 1966, 1967.

HOODED WARBLER (*Wilsonia citrina*). Mexico: 1(1), Ely 1973; Belize: 1(2), Nickell 1968.

WILSON'S WARBLER (*Wilsonia pusilla*). Belize: 1(1), Nickell 1968; El Salvador: 1(8), Thurber and Villeda 1972, 1974, 1976; Panama: 1(7), 2(1), Loftin, *infra*.

AMERICAN REDSTART (*Setophaga ruticilla*). Belize: 1(6), Nickell 1968; Panama: 2(1), Loftin et al., 1967; Jamaica: (15 returns, 37-month maximum interval), Diamond and Smith 1973.

ORCHARD ORIOLE (*Icterus spurius*). Belize: 1(72), 2(16), 3(18), 4(2), Nickell 1968; Honduras: 1(2), Nickell 1968.

SUMMER TANAGER (*Piranga rubra*). Honduras: 1(1), Nickell 1968; Panama: 1(1), 2(2), Loftin et al., 1966; Loftin, *infra*.

ROSE-BREADED GROSBEAK (*Pheucticus ludovicianus*). Belize: 1(1), 2(1), Nickell 1968; Honduras: 1(1), Nickell 1968; Panama: 1(2), Loftin et al., 1966; Loftin, *infra*.

BLUE GROSBEAK (*Guiraca caerulea*). Belize: 1(1), Nickell 1968.

INDIGO BUNTING (*Passerina cyanea*). Belize: 1(25), 2(1), 4(1), Nickell 1968; Guatemala: 1(6), Van Tyne 1931; Jamaica: 1(43), 2(21), 3(12), 4(7), 8(2), Johnston and Downer 1968; Downer 1972.

PAINTED BUNTING (*Passerina ciris*). Mexico: 1(1), Ely 1973; Belize: 1(4), Nickell 1968; El Salvador: 1(4), 2(1), 3(2), Thurber and Villeda 1972, 1974, 1976.

DICKCISSEL (*Spiza americana*). Trinidad: 1(1), French 1960.

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(Author's note: Toward subsequent compilations of records, I would greatly appreciate receiving notice of any additional published or unpublished reports of North American migrant birds returning to tropical winter quarters.)

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