

First records of the Spotted Rail (*Pardirallus maculatus*) for the United States, Chile, Bolivia and western Mexico

Breeding range extensions for this elusive species, plus documentation of wanderings as much as 1700 miles

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THE SPOTTED RAIL (*Pardirallus maculatus*) is a Neotropical species, roughly midway in size between the familiar Virginia (*Rallus limicola*) and King (*R. elegans*) Rails of North America. Although the senior author previously followed those authors who merge *Pardirallus* into *Rallus* (Dickerman and Parkes, 1969), Olson (1973) has presented convincing evidence that the Spotted Rail and its South American relatives are not at all closely related to true *Rallus*, justifying resurrection of the genus *Pardirallus*. The argument of Ripley (1977: 27) that the many anatomical differences between *Rallus* and *Pardirallus* are not of a generic nature but merely reflect "adaptations to open swamp life and more migratory habit as contrasted to tropical jungle life and reduced, flapping flight," respectively, is clearly irrelevant. *Pardirallus maculatus*, in spite of its anatomical "adaptations," shares the typical habitat and flight ability of *Rallus* and is by no means a bird of tropical jungles.

Like many other members of its family, the Spotted Rail is usually shy and elusive. Moreover, its preferred habitat is dense freshwater marshes of cattails or other tall grasses, sedges, rice, etc., where it could escape observation for many years. Although there is an apparent hiatus in the known range of the species in Central America (it has not been recorded from Guatemala, Honduras [*contra* Haverschmidt, 1968], El Salvador, or Nicaragua), Birkenholz and Jenni (1964) were almost certainly correct in their prediction that this species "will prove to

have a fairly continuous range in suitable habitat throughout the Caribbean slope of Middle America" — the limitation of their prediction to the Caribbean slope was probably superfluous, as we shall see. In South America, the known range is also disjoint. It was given by Meyer de Schauensee (1966) as: "SURINAM; FRENCH GUIANA; westward through VENEZUELA (Aragua, Carabobo, Portuguesa and Mérida) to the Cauca Valley in COLOMBIA. Eastern BRAZIL from Pará, Ceará, Pernambuco, Alagoas and Bahia, spottily south to Rio Grande do Sul; URUGUAY; PARAGUAY, ARGENTINA south to Tucumán, Córdoba, and Buenos Aires. Western PERU in Piura, Lambayeque and Libertad. Trinidad and Tobago." There is also an isolated population in Cuba, and the species is said to have formerly occurred in Jamaica (Bond, 1974)

The Spotted Rail was first described by Boddaert in 1783, based on a specimen from Cayenne, French Guiana. Bangs and Peck (1908) gave the subspecific name *insolitus* to a single specimen from British Honduras, at that time the only known specimen from Middle America. Later, Bangs (1913) gave the name *inoptatus* to the Cuban population, having compared two Cuban specimens with the still unique type of *insolitus* and one old South American specimen. Watson (1962) assembled 13 specimens from Cuba, five of which he had collected himself. He found that the alleged characters of *inoptatus* were invalid, with the range of variation among Cuban birds being the same as that among

South American. Bond (1963) and Ripley (1977) followed Watson in synonymizing *inoptatus* with *maculatus*.

ALTHOUGH SOME AUTHORS have considered the Middle American race *insolitus* as a "weakly characterized form" (Bond, 1963), it is, in fact, an excellent subspecies. The brown feather edgings of the back and wings are darker and duller in *insolitus*, but these colors are subject to wear and fading, and the differences are not always obvious unless unworn birds are being compared. A much better character, which is not eliminated by wear, is the nature of the white markings of the upperparts that give the species its English name. The white spots of the lower back and scapulars of the nominate race are larger than those of *insolitus*, and are elongated, those of the scapulars being streaks rather than spots. Although other authors seem to have missed this point, there is also a difference in bill size. Culmen lengths of the specimens in the American and Carnegie Museums of Natural History were as follows: *maculatus*, 12 ♂♂ 43-48 mm (mean 45.5), 3 ♀♀ 41.5-42.5 (41.8). *insolitus*, 3 ♂♂ 46-52 (49.3); 2 ♀♀ 41, 45. Measurements presented by Watson (1962) indicate that the Cuban population, although like *maculatus* in color, is nearer *insolitus* in bill length: 5 ♂♂ 47.5-50.5 (49.4); 6 ♀♀ 43-48.5 (45.8). Larger series would undoubtedly add to the overlap of measurements, but *insolitus* seems definitely to have larger bills than *maculatus*; bills of the latter are more slender as well as shorter.

This species is unusual not only among rails but among birds in general in that there are three color phases in the juvenal plumage (Dickerman and Haverschmidt, 1971). No corresponding color phases have been described among adults, but the number of molting specimens available is not enough to determine whether the "individual variation" described by Watson and others may, in fact, be correlated with the juvenal plumage color phases.

ON NOVEMBER 12, 1976, Kibbe, who was then working for an environmental impact firm in Pittsburgh, made his regular weekly survey for avian migrant mortality at a nuclear power plant on the south bank of the Ohio River at Beaver Valley, Beaver

County, Pennsylvania. In particular, he was surveying a 500-foot natural draft cooling tower, searching a walkway around the tower about 60 feet above its base. On the east-southeast side of the tower, he found a large, dark rail that had obviously struck the tower itself, and slid down to lodge between the inner walkway and the tower wall. He tentatively identified it as a juvenile King Rail, an understandable error as this is the only large rail to be expected in western Pennsylvania, and donated the specimen to Carnegie Museum of Natural History. Parkes was away when the bird was delivered, but when he took it out of the freezer upon his return he was astonished to find that it was an adult Spotted Rail. Although Kibbe surveyed the tower only once a week, the freshness of the thawed specimen made it evident that it must have struck the tower during the night of November 11-12. It had clearly been following the river valley; although the tower is 500 feet tall, the bluffs on either side of the Ohio in this area rise to well above 1000 feet. The Ohio and its major tributaries wind around so much in this general area that it is impossible to know what the bird's general flight path had been.

According to Storrs Olson (pers. comm. to Parkes), there are no more than about three skeletons of *Pardirallus maculatus* in existence in museums. Parkes therefore prepared the Pennsylvania specimen as a study skin, but also prepared a complete skeleton lacking only the bill and the wing and leg bones of the right side. The bird was an adult male, moderately fat. It was not weighed. Although Ripley (1977) mentions only animal food for this species, the stomach of the Pennsylvania bird contained only seeds of *Potamogeton epihydrus*, a common and widely distributed pondweed well known as a food of our native rails.

THE QUESTION NATURALLY ARISES as to the possibility of this bird having escaped from captivity. There was no physical indication that the bird had been a captive — the bill and feet were perfectly normal both in structure and color when the bird was thawed out. Relatively few species of Rallidae are imported alive into the United States, and this species is not listed in any of the



Figure 1. Spotted Rail, posterior view, showing extended wing from above.

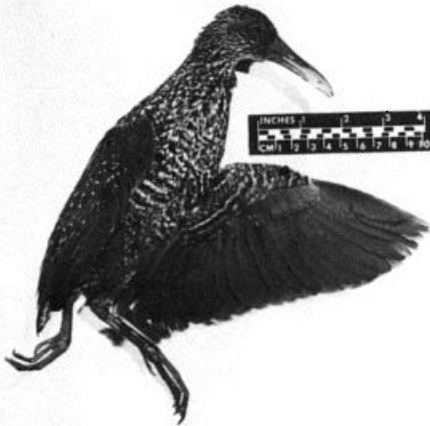


Figure 2. Spotted Rail, anterior view, showing underside of extended left wing. Photos/ Kenneth C. Parkes.

recent publications of the U.S. Fish and Wildlife Service that include all live birds known to have been imported here. Aviculturists consulted by Parkes have never heard of its being kept in this country. The only clue to the bird's ultimate origin lies in the geographic variation in the species. The nearest known breeding localities to Pennsylvania are Cuba and the coastal lowlands of Veracruz, Mexico. The specimen clearly belongs to the Middle American race *insolitus*, thus eliminating Cuba or South America as possible sources.

When a Neotropical bird has been found in the northeastern United States, especially in the fall, one thinks immediately of the possi-

bility of hurricane transport. This cannot be the explanation for the presence of a Spotted Rail in Pennsylvania in November 1976, however. It happens that 1976 was an unusual year: "An anomalous feature of this [1976] season is the complete absence of storms in both the Caribbean and Gulf of Mexico" (Lawrence, 1977).

Eliminating importation by man and transportation by windstorm, we are left with no real clues as to how this Spotted Rail got to Pennsylvania. However, members of the family Rallidae are notorious for wandering far out of their normal ranges, in spite of their deceptively weak-looking flight. An outstanding example is the familiar Purple Gallinule (*Porphyryla martinica*), which has wandered as far as the subantarctic island of South Georgia as well as to the Falkland Islands, Tristan da Cunha Island, Ascension Island, St. Helena Island, and South Africa (Ripley, 1977). Almost all of the Pacific islands are inhabited by rails, which had to have reached these islands by long transoceanic flights (possibly combined with rafting). Prior to the preparation of this paper, there was nothing in the literature to suggest that *Pardirallus maculatus* might be subject to similar wanderings. Two unpublished specimens in the American Museum of Natural History demonstrate that such wandering has, in fact, taken place in previous years. On September 19, 1906, J. T. Nichols picked up a Spotted Rail of the nominate race (now AMNH 90380) aboard ship at 21°S, 37°W, which is about 200 miles southeast of the nearest point of land on the Brazilian coast. Even more dramatic was another specimen of *P. m. maculatus* (AMNH 445164) killed by a cat on Juan Fernandez Island, Chile, and preserved by a native who gave it to Rollo Beck about November 1, 1913. This specimen, a mummy lacking many feathers but clearly identifiable, constitutes the first record of the species on Chilean soil, but the Juan Fernandez Islands are far from mainland Chile. They lie between 400 and 500 miles off the coast, and are approximately 1700 miles south of the nearest known range of the Spotted Rail in Peru, or 700 to 800 miles west and across the Andes from its range in Argen-

tina. The distance between the Juan Fernandez Islands and western Peru is, by a strange coincidence, the same as the distance between Beaver Valley, Pennsylvania and the Veracruz coast, about 1700 airline miles.

JUST AS PARKES WAS PREPARING to give a paper on the Pennsylvania record at the 1977 meeting of the American Ornithologists' Union in Berkeley, word came of a second United States record for *Pardirallus maculatus*. This bird was picked up alive on August 9, 1977 near a marshy area along a small creek on the south side of Brownwood, Brown County, in central Texas. This locality is just under 800 airline miles north of Tecolutla, Veracruz, the northernmost known locality for Spotted Rails in Mexico. The bird was weak and died the next day. While in captivity it took water, but no attempt was made to feed it. The specimen was prepared by Roth, who found it to be a male. Its stomach was empty. No injury was apparent, and the bird did not seem emaciated, but it weighed only 135 grams, whereas a male from Tecolutla weighed 211 grams (Dickerman and Warner, 1961); two Cuban males weighed 195 and 198 grams, and males from Surinam weighed 148-167 grams (Haverschmidt, 1968). The specimen has been deposited in the Texas Cooperative Wildlife Collection at Texas A&M University, where Keith A. Arnold has determined it to be, as expected, referable to *P. m. insolitus* of Middle America.

During the preparation of this paper, Parkes uncovered several other records of *Pardirallus maculatus* that represent extensions of the normal range of the species rather than spectacular wanderings. It has not been reported previously from Bolivia, although Short (1975) predicted that it might ultimately prove to occur in the Bolivian Chaco. In point of fact, a Bolivian specimen has existed for many years in the collection of Carnegie Museum of Natural History, but the record has not been previously published. It is a female just completing its first prebasic molt, taken on May 15, 1928 by José Steinbach at Buenavista (alt. 450 m), Dept. Santa Cruz, Bolivia, at the extreme northern

edge of the Chaco as defined by Short (1975).

The most recent summary of the distribution of *Pardirallus maculatus* (Ripley, 1977) lists it as having been taken in only three states of Mexico: Puebla, Veracruz and Chiapas. Ripley overlooked the parenthetical statement of Dickerman and Haverschmidt (1971) that two of their juvenile specimens of *P. m. insolitus* were from Oaxaca. They were collected 3 km north of Putla by Juan Nava S. and Santos Farfán B., on October 24 and December 19, 1965. The former specimen is now in the collection of Carnegie Museum of Natural History, the latter in that of Cornell University. The Putla locality is in the Pacific drainage of Mexico, and these specimens constitute the first records for the western portion of that country. The species is undoubtedly more widespread in Pacific Mexico, however. Two specimens in the Delaware Museum of Natural History (nos. 27551 and 27552), formerly in the collection of Allan R. Phillips, were collected by Sóstenes Romero H. at El Arenal, east shore of Laguna de Tres Palos, east of Acapulco, Guerrero, on April 18, 1971 and May 13, 1970, respectively. Both were adult males with testes not enlarged; the May specimen was in heavy molt and was noted by the collector as having been fat.

In addition, we have received excellent notes on a sight record by Theodore A. Chandik of Palo Alto, California, who, with a group of about ten birders, watched a Spotted Rail for about twenty minutes on May 1, 1976, at a pool described by Chandik as "in the state of Nayarit, Mexico, on the east side of Highway 15 between kilometer posts 84 and 86, about 46 km south of where Highway 15 crosses Río Acaponeta or about 51 km north of the junction of Highway 15 and Highway 54 (the road to San Blas)." This locality, near the extensive marshes of Laguna Agua Brava, is the northernmost Pacific record for the Spotted Rail thus far, but suitable habitat for the species exists well to the north, and there is no doubt that the full extent of the range of the species in western Mexico has yet to be determined.

AS IT IS NOW CLEAR both that the normal range of *Pardirallus maculatus* is more

extensive than had been thought, and that the species has the propensity for long distance wandering so well known in its family, birders should be alert to watch for it and should know what to look for. The photographs accompanying this article show the dorsal, ventral and lateral aspects of the freshly-thawed Pennsylvania specimen. The species is figured in a number of recent field guides, generally rather poorly. The oldest illustration among these, and, interestingly enough, still the most lifelike, is the line drawing by Earl Poole in the various editions of James Bond's West Indian field guide (most recently in Bond, 1974). Most dramatic is the full page color plate by Robert Verity Clem that accompanied the article by Watson (1962). This plate gives a good idea of the "soft part" colors — red iris, yellow-green bill with a red spot at the base of the lower mandible, and dull red legs. Unfortunately the bird is portrayed with an overlarge head and a short, thick neck (compare the proportions with the photographs in the present paper). Dr. Watson (pers. comm. to Parkes) explained that the artist, who had never seen the species alive or freshly dead, was misled by the grossly overstuffed study skin that had been provided to him as a model. The proportions of the Spotted Rail shown in Peterson and Chalif (1973: pl. 10) are better, although the body is still a bit overplump; in addition, the linear white markings shown on the back indicate that Peterson painted this plate using a specimen of the South American nominate race as a model.

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identifying it subspecifically; to Rollin Bauer of Cornell University for sending the data on the Oaxaca specimen in that collection; to the authorities of the American Museum of Natural History for permission to utilize their collections; and to Christopher C Fichtel for identifying the stomach contents of the Pennsylvania specimen.

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