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TWO NEW CARIBBEAN SUBSPECIES OF BARN OWL (*TYTO ALBA*), WITH REMARKS ON VARIATION IN OTHER POPULATIONS

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ABSTRACT

The Barn Owl *(Tyto alba)* population of the Isle of Pines, previously considered identical to *T. a. furcata* of mainland Cuba, is described as new; it is smaller than *furcata* and whiter than all but a few extreme specimens of that race. The population of the Bay Islands of Honduras, previously placed with *T. a. pratincola*, is also described as new; it is smaller and whiter than *pratincola*. A female of this new race was in heavy molt while feeding young. Sexual dichromatism is marked in many races of this species, so color comparisons must be made sex for sex. The characters and geographic range of *T. a. guatemalae* need to be reassessed.

INTRODUCTION

Only three specimens of the Barn Owl *(Tyto alba)* are known to have been collected on the Bay Islands, off the Caribbean coast of Honduras (Monroe, 1968:153). The first of these was taken by James Bond on "Bonacca Island" (=Isla Guanaja) on 29 February 1936, and is in the collection of the Academy of Natural Sciences, Philadelphia (ANSP). Bond (1936) assigned this specimen to the North American race *T. a. pratincola* (Bonaparte), which he stated "is known to range

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Table 1.—*Measurements in millimeters of adult Barn Owls (see text for methods of measuring).*

Sex	Flattened wing Observed range (Mean) ± SD (N)	Central rectrix Observed range (Mean) ± SD (N)
	Tyto alba pratincola (U.S. except Pacific states)	
Males	322–357 (341.3) ± 7.87 (13)	125–138 (130.5) ± 4.55 (14)
Females	335–357 (347.8) ± 7.11 (13)	131–144 (136.0) ± 3.88 (15)
	Tyto alba pratincola (California and one Oregon)	
Males	322–339 (331.2) ± 5.05 (10)	120–135 (127.0) ± 4.78 (10)
Females	334–348 (340.0) ± 4.20 (11)	127.5–142 (134.4) ± 4.51 (11)
	Tyto alba furcata (Cuba)	
Males	332–349 (341.8) ± 4.94 (9)	128–138 (133.8) ± 3.52 (12)
Females	345–359 (353.8) ± 4.50 (4)	134–141 (138.0) ± 2.38 (7)
	Tyto alba furcata (Jamaica)	
Males	332, 333	126, 133
Female	345	136
	Tyto alba niveicauda	
Males	318–338 (330.8) ± 7.66 (5)	122.5–128 (126.4) ± 3.60 (5)
Female	347	128
	Tyto alba bondi	
Male	301	114
Females	296+ (very worn), 316	114, 114.5

are made between *niveicauda* and the majority of *furcata* specimens. *Males*—gray marbling of upperparts coarser so that more white background shows, giving a paler appearance. Rectrices completely white, with no markings whatsoever. Primaries paler, with dark spots along the shaft reduced, especially on proximal primaries; in extreme instances (CM 41,383), these marks reduced to a single spot on the four outer primaries only; buffy wash and fuscous freckling of tips of inner primaries reduced or lacking, with the palest birds (CM 36,064; 41,383) having the inner primaries unmarked white. All but innermost secondaries (=tertials) pure white, with *at most* a small linear dark mark midway along shaft, and slight fuscous freckling on outer web near tip of the three or four secondaries immediately distal to tertials; all specimens have at least some secondaries pristinely white. In most *furcata*, all secondaries have at least two spots along the shaft, and have their outer webs freckled against a pale buff background, from all to about the distal half of their length. Pigmentation of the small feathers of the lower half of the facial disk of *niveicauda* reduced or lacking. Tiny fuscous dots on white underparts averaging fewer, sometimes nearly lacking.

Females—the one available female of *niveicauda* is more lightly marked than any examined female of *furcata*. Gray marbling of upperparts paler. Dark rectrix spots reduced to linear marks along the shaft on the inner three to four pairs; the only trace of buff is a stain around the dark spots of the central pair of rectrices only, and freckling is confined to the tips of the two central pairs. The two outermost pairs of rectrices are

Monte Barreto, Marianao, Cuba, 1 October 1976, a date on which a major migratory movement of passerines was also noted in Marianao.

Turning now to the population of the Bay Islands, this may be called:

Tyto alba bondi, new subspecies

Holotype.—CM 131,548, male (presumably adult) from French Harbor, Isla Roatán, Bay Islands, Honduras, collected by A. C. Twomey on 7 April 1947 (field no. 11,967).

Characters.—To some extent intermediate in color between *T. a. pratincola* and *T. a. furcata*, but markedly smaller than either (see Table 1). The single male specimen is slightly paler dorsally than the palest of all *pratincola* examined. Its tail is almost pure white, with a single broken crossbar near the bases of the central rectrices; two pairs of small spots representing remnants of central and subterminal crossbars on these same rectrices; and slight freckling on all but the two outermost pairs of rectrices. The palest male *pratincola* seen (CM 6661, Virginia) has the outer pair of rectrices pure white, then the remainder increasingly marbled with dusky toward the central pair, which has two fairly distinct and two broken crossbars. All other *pratincola* seen had much more heavily pigmented tails. The inner web of the outer primary of the male *bondi* has three broken crossbars (the proximal two hardly more than spots), whereas in *pratincola* there are four to five, sometimes broken but more often solid. The outer web of this primary in *bondi* has some spots at the level of the crossbars of the inner web, and some dark speckling at the tip, but otherwise the outer web and the outer half of the inner web are pale buff, barely more than cream-colored. In *pratincola* the crossbars continue across the outer web, and there is also heavy speckling in most individuals, on a background varying from rich light buff to dark tawny. All but the innermost secondaries (=tertials) of the male *bondi* are almost pure white, with speckling on the outer web (extending to the inner web on the innermost of these white secondaries). There are two to three dark marks near the shafts of the secondaries, where *pratincola* has dark bars completely crossing the feathers. Even the palest *pratincola* (CM 6661) has much heavier speckling on the outer webs of these secondaries, such that the slightly darker (compared with *bondi*) background color is almost completely obscured. Most *pratincola* have even heavier speckling, often completely obscuring the dark ground color of the outer webs of the secondaries. All *pratincola* in the CM series except 6661 have the tips of the feathers of the facial disk rich red-brown to blackish; in 6661 these markings are of a faint orange-buff. In the male *bondi* there is no pigment on the tips of the feathers of the lower two thirds of the disk (these appear dark, but the feathers are adventitiously stained).

In comparison with *furcata*, the male *bondi* has the dark marbling of the back finer, with the teardrop-shaped markings of the back, scapulars, and tertials smaller and less contrasting. The rectrices have fewer markings and less of the buff wash than most males of *furcata*. The primaries are similar to those of *furcata*, but paler, with the crossbars fuscous rather than blackish, and tending to break up more. Almost all of the remiges of all but the palest extremes of male *furcata* have a faint to well-marked teardrop spot near or at the tip; in the male *bondi* these are present on only the four innermost secondaries. The outer webs of the secondaries in average male *furcata* have a ground color of pure white for about the basal one third to one half, becoming washed with buffy on the distal portion. In *bondi*, the white basal portion is confined to the area normally concealed by coverts, the remainder being of a uniform cream color. The facial disk of *furcata* is pigmented as in *pratincola*, unlike *bondi*. The spotting of the underparts of the male *bondi* is much sparser, with smaller spots, than most *furcata*, about as in *niveicauda*.

The two females of *bondi* differ *inter se*, that from Isla Guanaja being more heavily pigmented than that from Isla Roatán. The paler bird was compared in detail with the two palest females of *pratincola* in the CM series (137,714, Maryland, and 94,894, Florida). The general dorsal color of the two female *bondi* differs little if at all from *pratincola*, except that the teardrop marks are smaller and less conspicuous. In both *bondi* the two outermost pairs of rectrices are much paler than in *pratincola* females of similar underparts color. The paler *bondi* has the outer rectrix ground color pure white, the second outermost faintly washed with buff on the inner web. The outer rectrix of the pale bird has three fuscous spots rather than crossbars, these almost completely confined to the outer web. The darker *bondi* has a buff wash along the midline of the otherwise white outer rectrix, with two central spots and a broken subterminal crossbar. Even the palest-tailed female *pratincola* have at least an indication and usually strong crossbars on *both* webs of both of the two outermost rectrices, and none have any of these areas pure white—there is at least some wash of buff or pale fuscous. In darker *pratincola* females, the outer webs of the outer rectrices are no paler than the central rectrices, giving the whole tail a uniform ground color.

The primaries of female *bondi* are paler to much paler than those of *pratincola*, with smaller crossbars. The outermost primary of the paler *bondi* has the inner web ground color very pale buff, almost white. In the darker *bondi* it is a deeper buff, gradually paling to whitish buff at the inner margin. In even the palest *pratincola*, the outer half of the inner web is the same color as the outer web, and is sharply defined from the inner half of the outer web, which is white. The crossbars of the outer primary of the paler *bondi* number three plus a tiny spot at the shaft where the proximal crossbar would be. In the darker *bondi* there are four crossbars and in *pratincola* the number varies from four to five. The ground color of the secondaries is also paler to much paler than in *pratincola*. That of the inner webs is white in the paler *bondi*. In the darker *bondi* the ground color of the outer web, and also the crossbars, extend a few millimeters across the shaft to the inner web. In *pratincola* the ground color extends across the whole tip of the inner web, the white inner edge occupies half or less of the width of the inner webs of the secondaries, and the crossbars invade this white part.

The facial disk of the darker *bondi* consists of orange-buff feathers, those of about the lower third having small blackish tips. In the paler *bondi*, the disk feathers are white except for a few along the lower edge, which have narrow blackish tips. In *pratincola* the ground color varies, but the feathers of the lower half of the disk have well-marked black tips and a subterminal band of reddish brown.

In comparison with females of *furcata*, the marbling of the back of both of the *bondi* specimens is finer, so that less of the white ground color shows through, giving a blacker appearance to the dorsum of *bondi*. There is less difference in the teardrop spots than in the males, but those of *bondi* have the white centers rounder or more arrowhead-shaped, less linear. The primaries are much like those of *furcata*, but with more freckling on the outer web. Similarly, the secondaries are like those of *furcata*, but with darker crossbars and more freckling on the outer webs and tips. The facial disk feathers are not diagnostic in this instance, those of *furcata* being about midway between those of the paler and darker specimen of *bondi*. The spots on the underparts are fewer and smaller than in *furcata*, but somewhat larger and more abundant than in the female *niveicauda*.

Range.—Known only from Islas Guanaja and Roatán, two of the three largest of the Bay Islands, off the Caribbean coast of Honduras.

Remarks.—It is a pleasure to name this distinctive form for our friend James Bond of the Academy of Natural Sciences of Philadelphia, collector of the first Bay Islands specimen of Barn Owl, whose

interest in the Caribbean Islands has long included those of the periphery, such as Isla Cozumel, the cays off Belize, and the Bay Islands.

It is unlikely that the difference in color between the Guanaja and Roatán females represents geographic rather than individual variation. In the only species that is known to show geographic variation *within* the Bay Islands, *Melanerpes aurifrons*, the populations of Isla Utila and Isla Roatán were obviously derived from two rather different mainland subspecies groups (Monroe, 1968:214). Monroe (1968:399) listed 29 resident land bird species from the Bay Islands; two of these are based on single, probably mislabeled specimens (Phillips, 1970). Of the 27 remaining species, Monroe recognized endemic Bay Islands subspecies for six, with the Barn Owl now making a seventh. Monroe apparently did not examine Bond's Isla Guanaja Barn Owl, as he erroneously stated (1968:154) that all of the Bay Islands specimens are "white-phase birds." His statement that Bay Islands Barn Owls are "indistinguishable from North American specimens" is, of course, also erroneous as demonstrated in the present paper.

Bond's specimen is of special interest to students of molt. It was a breeding bird—a note on the label reads "shot at nest while carrying rat to young." It is, however, actively molting flight feathers, and there are also scattered sheathed body feathers. At least some of the primaries and secondaries are partly grown, but the exact number would be difficult to determine without damaging the specimen. On the right side of the tail, rectrix 6 (outermost) is old, 5 about two thirds, 4 about three quarters, 3 old, 2 about three quarters grown, and 1 about seven eighths grown. On the left side, rectrices 6, 5, 3, 2, and 1 are old, and 4 about two thirds grown. Stresemann and Stresemann (1966:373) stated that most molting *Tyto alba* that they had examined had only one or two rectrices growing at any one time, and they found none with more than three. The Isla Guanaja specimen was growing four new rectrices on the right side and one on the left.

Neither Payne (1969) nor Foster (1975) mentioned owls in their surveys of molt/breeding overlap in tropical birds, but Payne later (1972) suggested that females of the far northern strigid owls *Nyctea scandiaca* and *Surnia ulula* "may molt soon after egg-laying."

Remarks on Middle American Mainland Populations

Carnegie Museum of Natural History has a male Barn Owl taken at Los Planes, in the coastal lowlands of Honduras, and a supposed pair from Siguatepeque, at about 1,000 m elevation in the interior, all collected by A. C. Twomey and R. W. Hawkins. Monroe (1968:154) wrote of the lowland male that it "is a white-phase individual matching *pratincola*." It indeed matches male *pratincola* in color, but has decidedly