

The Least Bittern in Mexico and Central America.—The Least Bittern (*Ixobrychus exilis*) has been reported from widely distributed localities in Central America, often on the basis of one or only a few specimens. The A.O.U. Check-list of North American birds (1957, fifth ed., Baltimore, Amer. Ornithol. Union) considered the status of birds from Central America to be uncertain, and the Mexican checklist (Friedmann et al. 1950, Pacific Coast Avifauna, No. 29: 33) recognized that some Mexican specimens were not identified subspecifically. During the course of research on the avifauna of the freshwater marshes in Mexico during the period 1959 to 1971 and other areas of Central America 1967 to present, large series of Least Bitterns have been assembled and additional material is available in other collections. To evaluate the systematic position of the populations of Mexico and Central America it was necessary first to reevaluate the characters of the two North American forms, *I. e. exilis* and *I. e. hesperis*.

Dickey and van Rossem (1924, Bull. Southern California Acad. Sci. 23: 11) described *I. e. hesperis* as similar in coloration to *exilis* "but larger in all dimensions, particularly in wing, tail and bill; tarsi and feet not only longer but heavier." Apparently all subsequent authors have relied on their measurements for identifying Least Bittern specimens. While measurements of larger series of additional specimens from the United States seem to uphold *hesperis* as a valid form based on the length of the wing, the extent of overlap is great and it barely averages larger in all other measurements (Table 1). With the larger series, averages for measurements of wings and tails tend to be slightly larger for *exilis* and slightly smaller for *hesperis* than those Dickey and van Rossem presented. No color differences could be found among large series of either sex nor among series of juveniles. Sexual dimorphism in size is very slight, ranging from about 1 to less than 3 percent, and essentially can be ignored.

Baja California populations are large (Table 1), while a male from San Blas, Nayarit (wing chord 121, tail 46) and a female from coastal Guerrero (wing 123, tail 42) are large but have somewhat short bills (41 and 42 respectively). The nesting populations of Tamaulipas and Veracruz, Mexico, the Peten and Pacific coastal lowlands of Guatemala, Belize, Honduras, and Costa Rica are all small with wing (chord) measurements mostly near or below the mean values in *exilis*.

The decision as to whether to recognize *hesperis* is more complicated when the populations of Least Bitterns from the Mexican Plateau and from the highlands of Guatemala are examined. The 45 adults (26 males, 19 females) available from the highlands of Mexico are intermediate in size between the population of eastern and western North America.

The series of Least Bitterns from San Lucas, Lake Atitlan, Guatemala was dis-

TABLE 1
MEASUREMENTS OF ADULT LEAST BITTERNS

	Wing chord		Tail		Tarsus		Exposed culmen	
	♂	♀	♂	♀	♂	♀	♂	♀
<i>I. e. exilis</i> (U.S.)	109-122	108-121	37-47	37-43	38-42	37-41	42-48	40-48
Mean	115.8	113.7	41.8	40.1	40.3	39.5	45.3	44.3
SD	3.4	3.4	2.8	1.8	1.7	1.4	1.9	1.8
Number	29	30	20	16	12	16	27	29
<i>I. e. hesperis</i> (U.S.)	116-128	114-129	41-48	40-47	37-45	36-45	44-51	43-50
Mean	122.7	121.6	44.3	42.9	42.0	41.7	46.9	46.7
SD	3.1	4.1	1.9	2.0	1.5	1.9	1.7	1.8
Number	33	28	35	28	23	22	35	28
Baja California	113-131		40-47				44-50	
Mean	122.5		43.9				46.9	
SD	5.6		2.5				2.0	
Number	10		8				9	
Mexican plateau	112-122	113-121	38-47	36-43	37-43	38-41	42-49	42-45
Mean	118.5	117.2	42.2	40.2	40.3	39.7	45.7	44.3
SD	3.2	2.3	2.1	2.0	1.9	1.4	1.7	2.1
Number	26	19	24	18	16	6	25	18
Coastal Tamaulipas and Veracruz	110-115	105-116	39-44	36-40			44-49	43-47
Mean	112.8	112.1	41.2	38.0			46.8	44.9
SD	2.0	3.5	2.1	1.3			1.9	1.3
Number	6	8	6	8			5	7
Lowland Guatemala and Belize to Panama	110-120	108-117	38-45	37-44			40-49	37-48
Mean	114.9	112.0	40.8	39.4			46.0	43.5
SD	2.9	2.9	3.9	2.4			2.4	1.3
Number	12	8	9	7			11	8
<i>I. e. pullus</i>	112-115	111	38-42	40			45-48	43
Mean	113.2		40.0				46	
Number	5		5				4	

cussed by Griscom (1932, Bull. Amer. Mus. Nat. Hist 64: 142), but without mentioning measurements. I have reexamined 11 of the 12 adults and 4 of the 5 juveniles he reported. The wings of four males collected 23 May and 18 June 1927 and labeled *hesperis* are 117, 121, 122 and 126. Wing measurements of two males collected 31 October 1926 are 114 and 118. The first was labeled *exilis* and the second *exilis* × *hesperis*. The same measurement for 5 adult females is 114, 115, 116, 120 and 121. All were labeled *hesperis* and initialed by Griscom, although the one measuring 116 was taken in October. Thus the nesting males of the Lake Atitlan population are nearly typical *hesperis*, assuming apparently that the one short-winged October male was a migrant. The wings of the females, however, average about the same as those of the Mexican Plateau!

From these data it becomes obvious that *Ixobrychus exilis hesperis* Dickey and van Rossem is not a definable entity, and that name should be placed as a synonym of *I. e. exilis* (Gmelin).

I can add no information to our knowledge of the population of Least Bitterns

from the Pacific coastal area of southern Sonora described as *I. e. pullus* van Rossem (1930, Trans. San Diego Soc. Nat. Hist. 6: 227). The six specimens from the original series that I examined differ, as described, in being darker, less rufous on the hind-neck, and with wing coverts brownish gray rather than creamy yellow as in *I. e. exilis*. Those six specimens measure smaller than other western populations (Table 1). Two other males collected at the same time period (April–May 1930) and localities as the type series have wings measuring 122 and 123 and are labeled *pullus* × *hesperis* and *hesperis* respectively. They are both paler and possibly do represent late migrants. An adult female collected 10 May 1970 at El Arenal, Guerrero, has even darker, more olive (less brown) wing patch and ventral streakings than the one female *pullus* examined. The browner coloration of the *pullus* female collected in May 1930 is probably due to museum age and discoloration by grease seepage. The Guerrero female is small (wing 114), in contrast to the other specimens from the west coast of Mexico discussed above. I believe no specimens have been collected from Sonora since the type series was collected.

Specimens examined: MEXICO total: 85—Sonora 8, Nayarit 1, Guerrero 2, Tamaulipas 8, Veracruz 7, Quintana Roo 1, Jalisco 2, Michoacán 17, Guanajuato 3, San Luis Potosí 1, Mexico 20, Morelos 15. GUATEMALA: Petén 2, Pacific lowlands 1, interior highlands 15. EL SALVADOR: 2. HONDURAS: 6. COSTA RICA: 5. PANAMA: 1.

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