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Wilson Bull., 105(4), 1993, pp. 694–695

First observations of the Blue-throated Macaw in Bolivia.—Since its discovery in the early 1800s, the Blue-throated Macaw (*Ara glaucogularis*) largely has remained an enigma (Ridgely, Conservation of New World Parrots, R. F. Pasquier, ed., pp. 233–384, Smithsonian Institution Press, 1980; Ingels et al., Le Gerfaut 71:283–294, 1981; Forshaw, Parrots of the World, Lansdowne Editions, 1989). Physical evidence of the species includes five museum specimens of unclear provenance (Ingels, ibid.) and approximately 200 live birds that Bolivian bird dealers have acquired from anonymous bird catchers. Conservationists have long assumed that this species is very rare and may be in immediate danger of extinction. There have been no published, first-hand observations of the species in the wild and no data to allow an assessment of its conservation status. Until now, there was not a single confirmed locality or habitat type in which to begin a survey.

Here we report the first observations of wild Blue-throated Macaws in the department of Beni in Amazonian Bolivia. The habitat is a seasonally-inundated mosaic of savannahs, palm groves, and low species diversity tropical forest of short stature. Late in the afternoon on 6 August 1992, C. A. Munn, Mariana V. Munn, and a local guide heard and momentarily observed a pair of macaws flying to roost in trees in a 1-ha island of trees in the savannah. Even from hundreds of meters the calls of this species were distinguishably higher in frequency and of different quality than those of the Blue-and-yellow Macaw (*A. ararauna*). Between 06:30 and 08:30 h on 7 August 1992, the Munns and the guide photographed and observed a pair preening and allopreening on a treetop in that same forest island. They also discovered that the perch tree was above a live *Acrocomia aculeata* palm in which the pair appeared to be excavating a nest cavity. The opening of the new cavity was approximately 14 m above the ground, and a typical pile of fresh palm fiber debris lay on the ground beneath. In September 1992, a research team of NYZS the Wildlife Conservation Society (WCS) began study of this excavating pair and of three other pairs at other nests located within 10 km of the first nest site. The other nests were in cavities in the trunks of *Attalea phalerata* palms. To date, we have observed 28 birds at two adjacent sites, and we have heard local reports of two more populations of the species, each of which is more than 100 km from the present site.

The habitat where we found this species resembles that of the third-hand reports presented by Forshaw (1989): "gallery forest along watercourses," but this description requires elaboration. Subsequent observations of feeding ecology of this macaw suggest that it requires the locally abundant palm *Attalea phalerata* at which they eat the sticky, sweet mesocarp of the ripe and nearly-ripe fruits. They also ate the ripe or nearly-ripe mesocarp of fruits of *Acrocomia aculeata* palms. On occasion the birds opened and drank the liquid from the very immature fruits of both palm species.

Until the 1980s, there was uncertainty over whether this species differed from the larger,

but otherwise similar, Blue-and-yellow Macaw, which third-hand reports suggested was sympatric with the Blue-throated Macaw (Ingels et al. 1981). Our observations confirmed this sympatry and showed that these macaws are outnumbered at our site by Blue-and-yellow Macaws by a factor of twenty or more.

Our guide (38 years old) was the only person we have found in that part of the Beni who in the past has trapped and traded large macaws. He reported that since 1977 he had caught perhaps a total of 1000 Blue-and-yellow and Red-and-green Macaws (*A. chloroptera*) and 6–9 Blue-throated Macaws and sold them to specialized businessmen/bird dealers from a major Bolivian city. In 1984, Bolivia outlawed this trade, and our guide stopped trapping macaws and switched to wage labor. Nevertheless, he reported that a few wealthy bird buyers in the major city still bought and traded small numbers of the most valuable, rarer macaws whenever international dealers placed orders. Moreover, he reported that an Argentinian bird dealer currently was offering illegal Bolivian dealers a high price for Blue-throated Macaws.

Because the Blue-throated Macaw may be extremely rare, still has a high price on its head, and is not yet assured protection from smugglers, we have chosen not to reveal the localities of our study or the name of our guide. Rather, we shall first determine the species' conservation status and implement measures for its protection. Scientists wishing further information about the species may write to the second author, who, in conjunction with Bolivian authorities, will evaluate each request.

Acknowledgments.—NYZS the Wildlife Conservation Society (WCS) financed this research in its entirety. We thank Mario Baudoin W., Director General of the National System of Protected Areas of the Bolivian National Secretariat of the Environment, for permission to do research in Bolivia. We also are grateful to Maria Marconi and Juan Pablo Arce of the Conservation Data Center of Bolivia for help with satellite imagery and cartography. Andrew Taber and Dolores Ayersa of WCS provided valuable logistical support and advice. We wish to extend our warmest thanks to the extremely hospitable Bolivian landowners and local people. Without expert guidance from our guide we never would have succeeded. We regret that security for the macaw prevents us from thanking these people here by name.

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Wilson Bull., 105(4), 1993, pp. 695–698

A probable bilateral gynandromorphic Black-throated Blue Warbler.—Gynandromorphism is a rare phenomenon which has been reported in butterflies, birds, some small mammals and, at least once, in humans (Hannah-Alava 1960). The majority of documented cases of gynandromorphism in birds have involved captive chickens, pheasants, and finches, but there have been over forty cases in wild birds (Kumerloeve 1987). Interestingly, the vast majority of cases in wild birds have been in the family Fringillidae.

For bird species whose sexual differences in plumage characters are controlled by genes, rather than mediated by hormones, a gynandromorphic individual exhibits male plumage on one half of the body and female plumage on the other half, usually with a sharp line of demarcation separating the halves (Crew and Munro 1938). A bird showing this sharp demarcation between the halves is said to be a bilateral gynandromorph. Male plumage is on the right side of most bilateral gynandromorphs (Kumerloeve 1987), with the male plumage corresponding to a testis on the right and the female plumage to an ovary on the