

Notes on the taxonomy of Brazilian parrots

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The systematics of the New World Psittacidae is facing problems that were created by attempts at reducing the number of generic names (i.e. "lumping"). The extreme homogeneity of the Psittaciformes induced Mayr and Amadon (1951) not to subdivide it. Smith (1975) and Homberger (1980, 1985) gathered the representatives of the New World Psittaciformes in one subfamily or tribe, respectively.

It is very difficult to separate the New World Psittaciformes genera on the basis of anatomical characters. There is much convergence and size-dependence among the skull and bill characters (Smith 1975). The genera *Ara* and *Aratinga* are morphologically "very similar"; "I cannot see any substantial reason why *Ara* and *Aratinga* should not be merged" (Smith *in litt.* 1987). Hopeful, however, are the following statements: "Functional-morphological studies on the surface structures of the palate, mouth cavity and tongue provide new insights into the systematics of neotropical parrots" (Homberger *in litt.* 1988).

Also other identification methods as, for instance, electrophoresis (biochemical systematics), as applied to Psittacidae by Sibley (1960) and Mainardi (1962) did not help in shedding light on the systematics of the New World parrots up to now.

However, the behavior may offer valid criteria for the systematics of the psittacines (ethological systematics). It is remarkable, for instance, that the American parrots copulate in an entirely different way from that of the rest of the parrots of the world. During copulation, the male of Australian parrots mounts the female (as is common among birds). In the American Psittaciformes, however, the male remains at the side (frequently the left side) of the female, holding firmly the perch with one foot and putting the other leg and wing over the female, while rubbing its cloaca against that of the female.

A reliable behavioral parameter that can be used

to distinguish certain parrot groups is the vocalization (Sick 1979, 1985). It is relatively easy to distinguish natural, monophyletic genera of the neotropical parrots by means of their vocalizations, though it is more difficult to do so for the species.

Vocalization (song) has been shown to be a useful character for systematics at the species level in other groups, though (Sick 1979, Payne 1986). Vocalizations have also been used for evaluating systematic relationships at higher levels, e.g., for nighthawks (Caprimulgidae; Davis 1962), woodpeckers (Picidae; Thielcke 1964) and owls (Strigidae; Marshall 1967, 1978). Vocalizations are especially valuable for phylogenetic conclusions when they are hereditary, as is generally the case in non-passerine birds and, thus, in parrots.

The true macaws. There are eight species that, in our view, truly represent the genus *Ara* Lacépède, 1799, of which *A. macao* (Linnaeus, 1758) is the type species. The genus *Ara* includes other seven species: *A. ararauna* (L., 1758), *A. glaucogularis* Dabbene, 1921, *A. militaris* (L., 1766), *A. ambigua* (Bechstein, 1811), *A. chloroptera* Gray, 1859, *A. rubrogenys* Lafresnaye, 1847, and *A. severa* (L., 1758).

The blue macaws are assembled in the genus *Anodorhynchus* Spix, 1824, which comprises the species *A. hyacinthinus* (Latham, 1790), *A. glaucus* (Vieillot, 1816), and *A. leari* Bonaparte, 1856 (Sick *et al.* 1987).

The macaws have a typical voice which inspired in Brazil the vernacular name *arara*. This name gave origin to the generic name *Ara*, which is a mutilation of the Indian word *arara*. It used to occur frequently that Indian names that were used as scientific names were mutilated.

The maracanãs. Peters (1937) applied the name *Ara* also to four non-macaws, the *maracanãs* (Indian name), namely the species *macarana*, *auricollis*,

manilata, and *nobilis*. Meyer de Schauensee (1966, 1970, 1982), Forshaw (1973) and others followed this arrangement.

The *maracanãs* are relatively large psittacines, with a bare facial area (a character that was overestimated in its value as a taxonomic character by systematists), a long tail and a green plumage which is suffused with some red or/and blue.

The *maracanãs* are not morphologically uniform. The earlier systematists assigned them to three genera: *Propyrrhura* Miranda-Ribeiro, 1920, *Orthopsittaca* Ridgway, 1912 and *Diopsittaca* Ridgway, 1912 (Pinto 1938).

The name *maracanã* is very well known in Brazil as much by the countrymen as by the people in the erudite circles, in the same manner as the name *arara* is.

The vocalization of the *maracanãs* differs from that of the true macaws, resembling more that of the representatives of the genus *Aratinga* Spix, 1824.

Without a new morphological base, we have to put back the taxons in the genera created for them formerly, adopting the names used in the catalog of Pinto (1938) in the following way: *Propyrrhura maracana* (Vieillot, 1816); *P. auricollis* (Cassin, 1853); *Orthopsittaca manilata* (Boddaert, 1783); and *Diopsittaca nobilis* (L., 1758). A modern revision of the group would hopefully reduce the number of genera.

The Golden Conure. The Golden Conure was affected by the same intention to simplify the scientific nomenclature as happened with the *maracanãs*. Instead of leaving the Golden Conure in its own genus *Guaruba* Lesson, 1831, Cory (1918) included it in the genus *Eupsittula* Bonaparte, 1853, today *Aratinga* Spix, 1824.

This seems not be warranted at all, as the Golden Conure, even as a taxidermised specimen, has little in common with the representatives of the genus *Aratinga*. This genus constitutes a reasonable taxonomic unit, comprising ten species.

The Golden Conure is a very peculiar parrot. Its behavior, vocalization and reproduction differ totally from those of *Aratinga* spp.. Once again we can learn from the Indians, who gave it the name *ararajuba*, which means "yellow macaw". Without knowing of this etymology, when making my first field observations on the *ararajuba* in the Gurupi River region (Maranhão), I noted that the behavior

of this bird reminded that of the true macaws. The other Indian name for this species is *guaruba*, that means "yellow bird". Thus, we should revive the formerly used generic name *Guaruba*, which represents an excellent monotypic genus. The complete right name of the Golden Conure should be *Guaruba guarouba* (Gmelin, 1788).

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