

needed, they will convey a more lively idea of the habits and economy of this group of birds, than could be obtained from a condensed account derived therefrom; at the same time I must remark that on some points they are very contradictory.

The Prince Maximilian of Wied, who has kindly forwarded to me some valuable notes on the Brazilian species observed by him during his travels in that part of South America, says, "The *Ramphastidæ* are very common in all parts of the extensive forests of the Brazils, and are killed in great numbers at the cooler portion of the year for the purposes of the table. To the stranger they are of even greater interest than to the natives, from their remarkable form and from the rich and strongly contrasted style of their colouring; their black or green bodies being adorned with markings of the most brilliant hue—red, orange, blue and white; their naked orbits in some instances red, and in others green or blue; the naked parts of the body dyed with brilliant colours; the legs blue or green, the irides blue, yellow, &c.; and the large bill of a different colour in every species, and in many instances very gaily marked. The colouring of the soft parts is, however, so evanescent, that, to determine the species with accuracy, they must be depicted during life or immediately after the birds are killed. Common as these birds are in their native wilds, it is exceedingly difficult to detect their breeding places; it is certain that they deposit their eggs in the hollow limbs and holes of the colossal trees so abundant in the tropical forests, but I was never so fortunate as to discover them. The stomachs of the specimens I examined contained nothing but the remains of fruits, principally of the softer kinds, for which indeed they have such a liking that they resort in great numbers to the plantations in the vicinity of their native haunts and commit sad havoc among their favourite delicacies. I was informed that they frequently steal and eat young birds, but no instance of their so doing came under my own observation, and I never detected the remains of animal food in their stomachs: Mr. Waterton's opinion agrees with mine, that they feed solely upon fruits; but Azara, among others, states that they also feed upon animal substances. The specimens we saw in a state of domestication were very voracious and perfectly omnivorous, but they seem to be purely frugivorous in a state of nature, a fact which was indeed confirmed by the Brazilian natives whom we questioned on the subject. In their manners the *Ramphastidæ* offer some resemblance to the *Corvidæ*, and especially to the Magpies; like them they are very troublesome to the birds of prey, particularly to the Owls, which they surround and annoy by making a great noise, all the while jerking their tails upwards and downwards. The flight of these birds is easy and graceful; and they sweep with facility over the loftiest trees of their native forests; their strangely developed bills, contrary to expectation, are no encumbrance to them, for a singularity of structure (the interior being replete with a tissue of air-filled cells) renders these organs very light and even buoyant. The voice of the *Ramphastidæ* is short and unmelodious, and is somewhat different in every species. Their feathers are used by the Indians for personal decoration, especially the yellow breasts of the birds, which they affix to their heads on each side near the temple, and also to the ends of their bows. The descriptions of these birds in the older authors are very incomplete and of little value, from want of knowledge relative to the colouring of their bill and soft parts; nor have they been correctly described in