

THE IDENTITY OF THE TOUCANS DESCRIBED BY
LINNAEUS IN THE 10TH AND 12TH EDITIONS
OF THE SYSTEMA NATURAE.

BY JAMES L. PETERS.

EDITION 10.

RAMPHASTOS PIPERIVORUS. R. rostro nigro: carina crassissima.

Habitat in America meridionali.

This is the entire diagnosis given for the species; there are no included references to other writers or plates. It is absolutely unidentifiable.

RAMPHASTOS TUCANUS. R. rostro rubro carina obtusa alba.

Habitat in America meridionali. Maxillae versus basin fascia nigra.

In this case likewise there are no references given but there cannot be the slightest doubt that this name is applicable to the species now currently called *Ramphastos movilis* P.L.S. Muller. Gould called attention to this in the second edition of his 'Monograph of the Ramphastidae' and refrained from using the name only because of certain pre-Linnean nomenclatural complications in force at the time, but which do not apply any longer. Recently Hartert (Nov. Zool., 32, 1925, p. 143) has tried to show that *tucanus* is "absolutely doubtful." It seems to me however that the description of the bill given by Linnaeus can fit no other species, besides it was the one best known in Europe in those days. The figure published by Petiver in 1709 is certainly identifiable as this species.

RAMPHASTOS PICATUS. R. rostro rubro apice nigro: carina compressa. *Pica brasiliensis*, Alb. av. 2 p. 24 t. 25; Aldr. orn. 1. l. 20 c. 19, [this reference is wrong and was corrected in ed. 12 to 1, p. 801 which equals book 12 chap. 19]. *Habitat* in America meridionali. Rostrum magnum inter congeres; etiam basi nigricans.

The remarks as to the large size of the bill were no doubt induced by the very great exaggeration of that member in Aldrovandus' plate. Albin's plate is much better proportioned. The bird however bears no resemblance to any known species: it was probably an artifact.

RAMPHASTOS ARACARI. R. rostro nigro: maxilla superiore lateribus alba, basi triloba. Toucan, Edw. av. 64 t. 64. Aracari, Marcgr. bras. 217; Raj. av. 44. *Habitat* in America meridionali. Maxilla superior ad nares triloba, quod non in reliquis, fasci abdomines anoque sanguineis.

The diagnosis and the last two references can apply only to the bird known today as *Pteroglossus aracari aracari* (Linn.). Edwards' "Toucan" is unidentifiable. Except for the white throat the bird might be *Ramphastos brevicarinatus* Gould. Edwards' plate was drawn from a cage bird from some part of the Spanish mainland. I fail to see how it can serve as the basis for the name of any species known today. It may be safely disregarded as having no bearing on this Linnean species or on others in the 12th edition.

EDITION 12.

RAMPHASTOS VIRIDIS. R. viridis, abdomine flavo; uropygio rubro. *Tucana cajanensis viridis* Briss. av. 4 p. 423 t. 433.

Tucan pectore flavo. Edw. av. 253 t. 329. *Habitat* in Cayana.

This is another composite. The diagnosis and Brissonian reference apply to the bird known today as *Pteroglossus viridis* (Linn.) and this name will continue to stand. Edwards figured and described a bird that is without doubt the species later named by Gould *Ramphastos brevicarinatus*.

RAMPHASTOS PIPERIVORUS, based on Edwards' pl. 330 and Brisson 4, p. 429, pl. 32, f. 2, is the bird now called *Selenidera culik* (Wagl.)

Unfortunately the certainly identifiable *R. piperivorus* of the 12th edition is preoccupied by *R. piperivorus* of the 10th edition, the brief diagnosis (see *antea*) being that of a very different species.

RAMPHASTOS ARACARI: Virtually the same as *R. aracari* of edition 10.

RAMPHASTOS PISCIVORUS: R. nigricans fascia abdominali crissoque rubris, uropygio albo. *Tucana* f. *Pica brasiliensis*, Edw. Av. t. 64. *Tucana brasiliensis gutture albo*, Briss. av. 4, p. 413. *Picus americanus*, Hern. Mex. 697. *Xochitenacatl tertia*, Raj. Av. 178. *Habitat* in America australi. Rostrum luteum macula coccinea in apice; mandibula inferior caerulea, Pedes caerulei, Nigra pileus dorsum, alae, cauda, venter, femora. Albida tempora, gula, pectus, uropygium. Rubra fascia pectoralis & crissum.

This name is a hopeless composite. The description cannot apply to any Toucan with a sufficient degree of accuracy to permit its being used. It certainly cannot be the *Ramphastos* from southern Mexico, for that bird has a yellow throat with the red posterior margin obsolete or often lacking. As I have shown, Edwards' plate 64 is not recognizable. Brisson's bird is absolutely indeterminate based as it is on Edwards; Fernandez's *Picus americanus*, also a composite, and Raj also taken from Fernandez.

RAMPHASTOS CALLORHINCHUS Wagl., Syst. Av. 1827 *Ramphastos* sp. 6 is based on Linnaeus' description and Edwards' plate and is simply a new name for *piscivorus*.

Lesson's *Ramphastos sulfuratus*¹ appeared on p. 173 in the third part of his *Traité d'Ornithologie* published in July 1830. The description is brief but can apply only to the large Toucan of southern Mexico (*Habite le Mexique*). Lichtenstein's *Ramphastos poecilorhynchus* appeared in the *Preiz. Verz. Mex. Vög.*, likewise published in 1830 but the exact date is not known. The only description, "Brust schwefelgeld, Bauch Schwarz; Nacken braunroth," is entirely applicable. With two available names published in the same year, the actual date of only one being known, I should certainly make use of that one, particularly when it appeared in a standard work such as Lesson's 'Traité.'

The races will therefore stand:

Ramphastos sulfuratus sulfuratus Less.

Southeastern Mexico to Guatemala and British Honduras.

Ramphastos sulfuratus brevicarinatus Gould.

Southeastern Guatemala (specimen in M.C.Z. examined).

South to northern Colombia.

RAMPHASTOS TUCANUS. Having established the identity of this name in edition 10, it is of no real concern what it represents in edition 12: as a matter of fact it is the same bird more fully described and with references added. The reference to Edwards' plate 238 is sufficient to definitely fix its identity.

RAMPHASTOS PICATUS is preoccupied by the unidentifiable monstrosity of edition 10.

¹ Van Tyne, (Museum of Zoology, University of Michigan, Misc. Publ. no. 19, 17 Jan. 1929, p. 7) has indicated that this name should replace *piscivorus*.

RAMPHASTOS DICOLORUS: *R. nigricans*, pectore abdomine crisso uropygioque rubris, gula lutea. *Tucana cayenensis*, gutture luteo, Briss. av. 4, p. 111 t. 31, f. 1. *Tucan pectore flavo*, Edw. av. 330 t. 329. *Habitat* in Cayana.

This species is another composite. For the identity of Edwards' plate 329 see under *R. viridis*. The description and Brissonian reference agree minutely with the bird now known under this name and the identity if the composite may be determined from those elements, no change in nomenclature being necessary. "Cayana" is wrong as the type locality, Cory in 1919 substituting south-eastern Brazil.

To summarize briefly:

Ramphastos piperivorus of ed. 10 is unrecognizable.

Ramphastos tucanus of ed. 10 = *R. tucanus tucanus* Linn. and replaces *R. monilis* P.L.S. Mull.

Ramphastos picatus of ed. 10 is unrecognizable, perhaps an artefact.

Ramphastos aracari of ed. 10 = *Pteroglossus aracari aracari* (Linn.).

Ramphastos viridis of ed. 12 = *Pteroglossus viridis viridis* (Linn.).

Ramphastos piperivorus of ed. 12 is preoccupied by the same name in ed. 10. It is the same as the bird now called *Selenidera culik* (Wagl.).

Ramphastos aracari of. ed. 12 = *R. aracari* of ed. 10.

Ramphastos piscivorus is an unidentifiable composite with not a single positive element.

Ramphastos tucanus of ed. 12 = *R. tucanus* of ed. 10.

Ramphastos picatus of ed. 12 is preoccupied.

Ramphastos dicolorus of ed. 12 = *Ramphastos dicolorus* Linn.

Museum of Comparative Zoology,
Cambridge, Mass.