The identity of Azara's description No. 18 "Gavilán mixto pintado" is a juvenile Harris's hawk (*Parabuteo unicinctus*)

Identita Azarovho opisu č. 18 „Gavilán mixto pintado“ je juvenilný myšiak štvorfarebný (*Parabuteo unicinctus*)

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Abstract: The classic ornithological work by Félix de Azara "Apuntamientos para la historia natural de los páxaros del Paraguay y Rio de la Plata" was one of the first descriptive texts dealing with the avifauna of the Southern Cone of South America. Azara's No. 18 "Gavilán mixto pintado" has long been misidentified as a juvenile great black hawk (*Buteogallus urubitinga* (Gmelin, 1788)). However, there are clear inconsistencies in the description of the plumage coloration, shape and measurements which make that identification erroneous, and Azara's No. 18 can in fact be convincingly identified as the juvenile plumage of the Harris's hawk (*Parabuteo unicinctus* (Temminck, 1824)). The description by Azara contains numerous diagnostic characteristics for that species, and the measurements provided by him are inconsistent with those of the great black hawk, yet remarkably similar to those provided by the same author for the description of the adult No. 19 "Gavilán mixto obscuro y canela". No scientific names have apparently ever been based on Azara No. 18.

Abstrakt: Klasické ornitologické dielo Félix de Azaru „Apuntamientos para la historia natural de los páxaros del Paraguay y Rio de la Plata“ bolo jedným z prvých popisných textov zaoberajúcich sa avifaunou južného cípu Južnej Ameriky. Azarove číslo 18 – „Gavilán mixto pintado“ je už dlho nesprávne identifikované ako juvenilný myšiak vodný (*Buteogallus urubitinga* (Gmelin, 1788)). Avšak v opise sfarbenia, tvaru a rozmerov sú zrejme nezrovnalosti, ktoré spôsobujú, že toto určenie je nesprávne, a Azarove číslo 18 možno v skutočnosti presvedčivo identifikovať ako myšiaka štvorfarebného (*Parabuteo unicinctus* (Temminck, 1824)) v juvenilnom šate. Popis od Azara obsahuje množstvo diagnostických charakteristík tohto druhu a ním uvádzané rozmery sa nezhodujú s parametrami myšiaka vodného, avšak sú obzvlášť podobné tým, ktoré sú uvedené Azarom pre adultného jedinca č. 19 – „Gavilán mixto obscuro y canela“. Z Azarovho č. 18 zrejme neboli nikdy odvodené žiadne vedecké mená druhov.

Key words: *Buteogallus urubitinga*, Gavilán mixto, Great Black Hawk, Paraguay

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Shortly after the publication of Azara's (1802, 1805a,b) key ornithological text "Apuntamientos para la historia natural de los páxaros del Paraguay y Rio de la Plata", the identity of his No. 18 Gavilán mixto pintado (Azara 1802) was proposed by Kaup (1847) to be a juvenile great black hawk (*Buteogallus urubitinga* (Gmelin, 1788)), though he did not provide any justification. This conclusion has since been repeated without question by all major reviewers of Azara's work (Hartlaub 1847, Berlepsch 1887, Laubmann 1939, Pereyra 1945), though Sonnini (in Azara 1809) had earlier correctly

stated that the description was of a hitherto undescribed species. However, the description (both of the morphology and the behaviour) and measurements provided refer to a quite different bird, as Azara (1802) himself acknowledged, despite recognising a superficial similarity in plumage.

Azara described his No. 18 Gavilán mixto pintado as follows (my translation; the original text is included in Appendix 1):

"It has many things in common in its colours and their distribution with the previous species, and in what

Fig. 1. Juvenile of great black hawk (*Buteogallus urubitinga*) (a), juvenile of Harris's hawk (*Parabuteo unicinctus*) (b). Presidente Hayes Department, Paraguay.

Obr. 1. Juvenilný jedinec myšiaka vodného (*Buteogallus urubitinga*) (a), juvenilný jedinec myšiaka štvorfarebného (*Parabuteo unicinctus*) (b). Región Presidente Hayes, Paraguay.

I have observed of the customs of both of them; only that this one is much more scarce; it seems more active and it is much smaller.

Length 20 inches; tail 9 ½; wingspan 43. A cinnamon eyebrow, varied a little with dark, begins over the eyelid and goes to the side of the nape. From the rear edge of the eye there is a line thinner than the eyebrow, and it accompanies it below. The rest of the side of the head, and also part of the neck and sides of the nape, have the feathers of the aforementioned cinnamon with dark markings in the centres. The rest of the neck or nape is the same, but the dark dominates much more. The crown is dark brown, like the back and as far as the upper-tail coverts, which are white. The scapulars are also dark brown; but lifting up the feathers cinnamon cross lines are visible, and those of the rump are white. The coverts are dark with the edges cinnamon, and small cinnamon-white spots in the form of random, irregular lines. The tail has the base white, and the rest has even stripes of dark and grey, with the tip cinnamon-white. The upper side of the flight feathers and the outer coverts are like the tail. The foreneck to the venter is streaked with cinnamon-white and dark, because every feather has a large, pear-shaped spot of this colour. The white venter has a dark heart on every feather, and from the anus to the tail is cinnamon-white with strange dark markings in the form of an arrow. Legs are cinnamon with dark barring. The flight feathers and underside of the tail are barred dark and white; but on the outer part there is a large white spot from the base to the two-thirds. The underwing coverts are streaked with cinnamon-white and dark, and each of these has another of cinnamon next to it.

Flight feathers 24, the fourth longest. Tail 12 feathers in slight wedge-shape, the outermost 11 lines shorter. Leg 57. Tarsus 45, colour of straw feathered at the top, with flattened scales on the front and a triangular prism. Mid-toe 22, its nail 9, united by a membrane to the outermost until the last phalange. Bill 18, its membrane greenish-yellow, in which is the nostril, half outside: the tip is black, the rest clear blue, and the iris is dark cinnamon.

I killed an adult, whose upper mandible was so inclined to the right that its tip was deviated four lines from the lower, which was straight, it being impossible for them to unite".

Azara (1802) begins his description by noting the similarity in colour and pattern to his previous species, No. 17 Gavilán mixto chorreado, but highlights differences in behaviour and size. No. 17 refers to the juvenile great black hawk (*Buteogallus urubitinga*) (Fig. 1a), the morphologically similar adult of which is described later as No. 20 Gavilán mixto negro. However, the measurements provided for No. 18 are so different to these that it becomes impossible to rationalise them as belonging to the same species (Table 1). Azara (1802) No. 19 Gavilán mixto obscura y canela, on the other hand, has measurements which are remarkably similar to those of No. 18, and both of these descriptions in fact refer to the same species, Harris's hawk (*Parabuteo unicinctus*), with No. 19 featuring the adult and No. 18 the juvenile (first basic) plumage (Fig. 1b).

Whilst the morphometrics are clear enough to distinguish Harris's hawk from the much larger, much longer-

Tab. 1. Comparative measurements (mm) taken from Azara's descriptions (one inch = 25.6 mm; one line = 2.21 mm). In parentheses next to some of the major measurements provided by Azara are range measurements for the species given in the modern literature, taken from the following sources: total length (Thiollay 1994); tail (Ferguson-Lees & Christie 2001); wingspan (*Parabuteo unicinctus*: Dwyer & Bednarz 2020; *Buteogallus urubitinga*: Van Dort 2020); tarsus (Blake 1979).

Tab. 1. Porovnanie rozmerov (mm) prevzatých z Azarových opisov (jeden palec = 25,6 mm; jedna čiara = 2,21 mm). V zátvorkách vedľa niektorých z hlavných rozmerov, uvedených Azarom, sú hraničné rozmery týchto druhov uvádzaných v modernej literatúre, prevzaté z nasledujúcich zdrojov: celková dĺžka (Thiollay 1994); dĺžka chvosta (Ferguson-Lees & Christie 2001); rozpätie krídel (*Parabuteo unicinctus*: Dwyer & Bednarz 2020; *Buteogallus urubitinga*: Van Dort 2020); tarsus (Blake 1979).

	no. 18 gavilán mixto pintado (<i>Parabuteo u. unicinctus</i> ; juvenile)	no. 19 gavilán mixto obscuro y canela (<i>Parabuteo u. unicinctus</i> ; adult)	no. 17 gavilán mixto chorreado (<i>Buteogallus u. urubitinga</i> ; juvenile)	no. 20 gavilán mixto negro (<i>Buteogallus u. urubitinga</i> ; adult)
total length / celková dĺžka	512.0	512.0 (480–560)	614.4	601.6 (510–640)
tail / chvost	243.2	217.6 (228–265)	256.0	263.7 (230–270)
wingspan / rozpätie krídel	1100.8	1100.8 (1030–1190)	1305.6	1382.4 (1150–1370)
leg / noha	126.0	121.6	152.5	159.1
tarsus / behák	99.5	92.8 (80–92)	139.2	143.7 (114–128)
mid-toe / stredný prst	48.6	46.4	53.0	53.0 (49–52.5)
nail / pazúr	19.9	22.1	28.7	24.3
bill / zobák	39.8	35.4	46.4	42.0

legged and shorter-tailed great black hawk (Table 1), it is worth pointing out that the juveniles of both species do indeed show a superficial resemblance to each other in plumage colouration and pattern (Fig. 1). Nonetheless, the plumage description is also characteristic for Harris's hawk. The crucial difference in the ratio of tail length to total length indicate a rather long-tailed bird, the mention of white rump and upper-tail coverts (which are absent in the juvenile great black hawk), the cinnamon-edged wing coverts and the tail pattern with a pale cinnamon-white tip, are all characteristic of a juvenile Harris's hawk, and are not shared by the juvenile great black hawk.

To my knowledge no scientific names are based on Azara's (1802) description of No. 18 Gavilán mixto pintado.

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Appendix 1. Original text from Azara (1802).

Príloha 1. Pôvodný text od Azaru (1802).

NUM. XVIII
(GAVILÁN MIXTO) DEL PINTADO

Tiene bastante semejanza en las tintas y su distribución con el precedente, y lo que he observado de costumbres es lo mismo en ambos; solo que éste es mucho mas escaso: me parece mas activo; y es mucho menor.

Longitud 20 pulgadas: cola 9 ½: braza 43. Una ceja acanelada, variada muy poco de obscuro, principia sobre el tejadillo del ojo y va al costado del cogote. De lo postrero del ojo hace una tira mas angosta que la ceja, y la acompaña por debaxo. El resto del costado de la cabeza, y en seguida parte del cuello y del costado del cogote, tienen las plumas de dicha canela con manchitas obscuras en los centros. Lo mismo es el resto sobre el cuello ó pestorejo, pero domina mucho lo obscuro. Sobre la cabeza es de un pardo obscuro, como la espalda y hasta los timoneles, que son blancos. También es pardo obscuro el escapulario; pero elevando las plumas se ve tienen listones al través acanelados, y las de la rabadilla blancos. Las cobijas son obscuras con las borditas acaneladas y manchitas blancas acaneladas á manera de faxas mal seguidas al través, que se ven alborotándolas. La cola tiene raiz blanca, y lo demás á tiras casi iguales obscuras y aplomadas, con la puntita blanca acanelada. La barba superior dé los remos y las cobijas del trozo externo son como la cola. Lo anterior del cuello y hasta el vientre es jaspeado de canela blanquizca y obscuro, porque cada pluma tiene de este color una mancha grande en figura de pera. El vientre blanco con un corazón obscuro en cada pluma, y del ano á la cola blanco acanelado con raras manchas obscuras en figura de flecha. Las piernas acaneladas con tiras obscuras de través. Los remos y cola debaxo á tiras obscuras y blancas; pero en el trozo exterior hay una grande mancha blanca desde la raiz á los dos tercios. Las tapadas á tiras blancas acaneladas y obscuras, y cada una de éstas tiene pegada otra de canela.

Remos 24, el quarto mayor. Cola 12 plumas en escalerilla, la de afuera 11 líneas mas corta. Pierna 57. Tarso 45, color de paja poco vestido en lo alto, escamoso á tablas delante, y prismático triangular. Dedo medio 22, su uña 9, unido con membrana al exterior hasta la primera falange. Pico 18, su membrana amarilla verdosa, en que está el respiradero, la mitad fuera: la punta es negra, lo demás azul claro, y el iris acanelado obscuro.

Maté un adulto, cuya mandíbula superior se inclinaba tanto á la derecha, que su punta quedaba desviada quatro líneas de la inferior, que era recta, siendo imposible que ajustasen.