

other when both were extended, was nine feet and two inches; the mouth was large enough to contain, with ease, the head of a boy of ten years of age, and the throat so capacious as to admit the foot or leg of a man boot and all. Doubts were entertained, at first, what it was, but it is now decided to be the large Pelican of the sea coast, as upon examination we are told (by Dr. Mitchell)¹ that it agrees to the character of the *Pelicanus Acquillus* [aquilus] of *Linnaeus* [White Pelican] and the *Onocratalus* of *Brisson*."—CONSTANCE D. SHERMAN, *American Museum of Natural History, New York City*.

Nests of *Empidonomus varius*, *Pitangus lictor*, and *Myiozetetes cayanensis*.—The nest ascribed by Haverschmidt (*Auk*, 74: 240, 1957) to *Pitangus lictor* was undoubtedly that of *Empidonomus varius*. The Penard brothers' (*De Vogels van Guyana*, Vol. 2, 263, 1910) description of the nest of *E. varius* corresponds closely with the one described by Haverschmidt. Their statement that *P. lictor* builds an open nest (*op. cit.*, 246) is incorrect: also the size given for the eggs is small for that species. I am indebted to G. D. Smooker (*in litt.*) for information regarding eggs in the Penard Collection in the Leyden Museum: he states that the eggs attributed to *P. lictor* are certainly not of that species, and on the authority of R. Kreuger that there are no eggs of *Empidonomus varius* in the collection. Beebe (*Tropical Wild Life in British Guiana*, 225, 1917) gives a good first-hand description of the nest of *E. varius*. Haverschmidt's statement that Young's note on *P. lictor* (*Ibis*, 1929, 227) refers to *Myiozetetes cayanensis* is partly correct, but in my opinion the nests and eggs described are those of *P. lictor*, while the descriptions of voice and display apply unmistakably to *M. cayanensis*. That Young confused the two species is also suggested by his omission of *M. cayanensis*, the commoner bird, from his list. In the notes that follow the information given me by Sir Charles F. Belcher, J. D. Macdonald, and G. D. Smooker is gratefully acknowledged.

Empidonomus varius is considerably smaller than *P. lictor*, and is very distinct in spite of broad similarities in plumage, especially the head pattern. It utters a rather harsh *chee-chee-chu*, the final syllable prolonged. I found a nest in a low tree overhanging the Boerasiri canal near the British Guiana coast in June 1927, and later at H.M.P.S., Mazaruni, saw four more occupied nests on outer branches of Citrus bushes. I was with Sir Charles Belcher when he took the clutch of two eggs (Belcher Collection, British Museum [Natural History]) from one of these on 28 January 1932. The eggs are regular ovals, pale buff with warm-brown spots and blotches, and pale, slate-gray shell marks, well distributed but tending to be concentrated at the large end. Macdonald (*in litt.*) found both eggs of Belcher's set to measure 21×15.5 mm., and a clutch from Brazil (Crowley Bequest) 20.8×15.8 , 21×16 mm.; he noted that the latter are slightly more heavily marked. The nests I examined were frail, shallow saucers of dead weed stems, coarse in the foundation, of finer material and smooth inside, and sometimes lined with fine rootlets, rather like doves' nests. They were on horizontal forks near the ends of branches.

G. D. Smooker, who knew *Pitangus lictor* well on the British Guiana coast, found it a rather silent bird, and he heard it utter only a rather plaintive *quirk* without assuming the display postures characteristic of *P. sulphuratus* when mak-

¹ Samuel Latham Mitchell, 1764–1831, studied medicine and law. He was a member of the legislature for several terms, was appointed Professor of Chemistry, Natural History and Philosophy in Columbia College in 1792, and made the first voyage in a steamboat with Fulton in August 1807.

ing its loud *kiskadee-kiskadee* cry, and it was much less common. I found the domed nest of *P. lictor* on a lower, horizontal branch of a mango tree at H.M.P.S., Mazaruni, on 23 October 1936. The three eggs, now in the Belcher Collection of the British Museum (Natural History), are regular ovals, pale cream with deep-lilac and purplish-slate shell marks and warm-brown and blackish blotches and spots, chiefly at the large end: they measure 27×20.5 , 25.7×20.3 , 25×20 mm. Macdonald (*in litt.*) has compared them with eggs of *P. sulphuratus* (Belcher Collection) from Trinidad, and with two eggs said to be *P. lictor* (Crowley Bequest) from Brazil: he finds them more like the latter, and smaller than those of *P. sulphuratus*. Another clutch (Belcher Collection) was taken by Belcher from a domed nest near Georgetown, British Guiana, in February 1936. He thought at the time they were a clutch of small *P. sulphuratus*, but Smooker recognized them as *P. lictor*. I have seen them recently, and have their measurements, 27.5×19.5 , 26.5×19 , 25.7×19.1 mm., from Macdonald. They differ from my set in being more elongate and marked only with well-distributed, small, black spots. In February 1938 I saw several nests of *P. lictor* on the lower Berbice River, British Guiana, on low branches of thorny bushes (*Drepanocarpus* sp.) overhanging the water.

The other species, *Myiozetetes cayanensis*, that has been confused with *P. lictor*, is about the same size as *E. varius*, and builds a domed nest. It utters a short trill when displaying, and at other times a plaintive, drawn-out whistle. During display, common to both sexes, it sits rather upright and opens and quivers the wings with crest raised, the postures being very like those of *P. sulphuratus*. In the period 1932–1939, I examined about 30 occupied nests of *Myiozetetes cayanensis* at H.M.P.S., Mazaruni. They were built in trees or bushes at heights from one to 11 meters above the ground, most commonly between two and four meters. They were made of grass, sometimes mixed with teased-out fibers and fine, pliable stems, and were finished smoothly with fine material inside. In one case there were a few white feathers as lining, and white decorations, *e.g.*, rags, string, feathers, and lichen, were frequently seen around, and especially below, the entrance, long material being gathered up in loops. The nests varied in size but were smaller than those of *Pitangus* spp., and proportionately less deep, inside measurements being 6–7.5 cm. in diameter and about 4 cm. deep below the 5-cm. entrance hole. Smooker (*in litt.*) observed that the nests of *Pitangus* can be lifted bodily almost intact from their position whereas those of *M. cayanensis* are built into, or even woven among, the supporting twigs. The clutch was usually two and occasionally three, the eggs being rather long and slightly pointed ovals, whitish, spotted with reddish brown, chiefly at the large end, the spots sometimes replaced by small, paler, washy blotches. One set (Belcher Collection) measured 23×16 , 22×15.5 mm. This species was the principal host of the nest-usurping *Legatus leucophaeus* at H.M.P.S., Mazaruni.—T. A. W. DAVIS, *South Mullock, Haverfordwest, Pems., Great Britain.*

Mr. Davis states categorically that the nest with eggs of *Pitangus lictor* described by me (*Auk*, 74: 240, 1957) belongs to *Empidonomus varius* but fails to bear in mind that I flushed and shot the sitting bird, a practice I always (reluctantly) follow in such cases. I can add that on 23 February 1958 I found in the same locality another nest of *Pitangus lictor* in the same situation in a young shade tree (an open-cup nest neatly built of small roots and branches and the nest cup lined with very fine roots), which contained three nestlings with sprouting feathers while the parent birds sat scolding in the nest tree when I examined the

nest. *Empidonomus varius* is indeed a very different bird that can be confused (at least in this country) only with *Legatus leucophaius*. Moreover, it is not, as Mr. Davis states, "considerably smaller" than *P. lictor*.

The wing measurements and weights of material collected by me in Surinam are:

Pitangus lictor,

wing 5 ♂♂ 89–97 mm., 4 ♀♀ 82–96 mm.
weight 9 ♂♂ 23–28 grams, 6 ♀♀ 20–28 grams.

Empidonomus varius,

wing 6 ♂♂ 93–97 mm., 3 ♀♀ 91–95 mm.
weight 13 ♂♂ 23–27 grams, 4 ♀♀ 23–25 grams.

Furthermore, *Empidonomus varius* does not breed in the locality where I found *P. lictor* nesting. *E. varius* has (at least in the region where I live) a wholly different habitat as it nests in the sandy savannas with scattered bushes more into the interior of the country and not in the coastal plane where *P. lictor* is common.

I wholly agree with Mr. Davis that the description by Beebe of the nest of *E. varius*: "a weak flimsy platform of twigs fashioned like the nest of a dove and placed in an exposed position" is most characteristic. It agrees with my own experience. But this flimsy dovelike platform cannot be confused with the well-built nest and with a distinct and neatly lined nest cup of *P. lictor* as shown on my photograph.

Mr. Davis further quotes some second-hand evidence on material in the Penard egg collection from Surinam, which is preserved in the Leiden museum, but apparently does not know the revision by Hellebrekers (*Zool. Meded.*, 24, 1942 and 25, 1945) of this collection.

I am aware of the fact that there are a number of misidentifications in this collection, but the same holds true for some of the statements by Young and also for the Belcher and Smooker collection from Trinidad.

However, the description of the nest of *P. lictor* by the Penards in their book is correct, and the measurements of its eggs correspond with mine, so I see no reason to doubt the identity of the eggs of *P. lictor* in this collection. There is extensive material of *Pitangus sulphuratus*, *P. lictor*, and *Myiozetetes cayanensis* in this collection and that the eggs of *Empidonomus varius* are not represented is to be expected, as the material was mainly collected in the neighborhood of Paramaribo where *E. varius* does not nest and where *P. lictor* is common.

I quote the measurements given by Hellebrekers:

Pitangus sulphuratus average of 50 eggs: 27.9 × 20.03 mm.

maximum: 32.4 × 19.6 mm.; 29.1 × 21.4 mm.

minimum: 24.2 × 18.7 mm.; 27.3 × 18.4 mm.

Pitangus lictor average of 50 eggs: 20.7 × 16.04 mm.

maximum: 22.9 × 16.2 mm.; 22 × 17.2 mm.

minimum: 18.7 × 16 mm.; 19.8 × 14.3 mm.

Myiozetetes cayanensis average of 50 eggs: 22.53 × 16.05 mm.

maximum: 25.6 × 17.8 mm.

minimum: 20.4 × 17 mm.; 20.1 × 14.4 mm.

These measurements correspond with my own experience, and the eggs Mr. Davis attributes to *P. lictor* are far too large for this species and fall within the range of *P. sulphuratus*, but only the collecting of one of the parent birds would have solved this problem as I did in my case.—F. HAVERSCHMIDT.