

GENERAL NOTES

The Nest of *Pitangus lictor*.—In a recent issue of *The Auk* T. A. W. Davis (1961) and F. Haverschmidt have revived a controversy concerning the form of the nest built by *Pitangus lictor*. Haverschmidt (1957, and 1961, the latter a note appended to Davis' paper) described the nest as being an open cup, built of small roots and branches and lined with fine roots. Davis (1961), on the other hand, claimed that the nest is domed; while he did not define the term "domed" it can be taken to mean that the nest has walls, a roof, a lateral entrance, and a more-or-less spherical appearance. He did not state of what materials the nest is constructed, but implied grasses in stating that he believes Young's (1929) description of nests built of grass applies to the nest of this species. Both Haverschmidt and Davis supported their statements by citing the findings of other workers.

That Haverschmidt's description applies to the nest of *Pitangus lictor* cannot be doubted, for he flushed and shot the female from the first nest he found. He draws support from the Penard brothers (1910), who also describe the nest as an open cup, although built of grasses and leaves. As Haverschmidt pointed out in detail in 1961, however, there must exist some doubt concerning Davis' observations since it cannot be known for certain that Davis correctly identified the species in the field. The uncertainty arises from the statement of Davis that another tyrannid, *Empidonomus varius*, is "considerably smaller" than *P. lictor*, when in fact the two species are just about the same size, suggesting that Davis may possibly have been confusing *P. lictor* and *P. sulphuratus*, a larger congener. Haverschmidt also indicates that Davis' description of the eggs of *P. lictor* likely applies to the eggs of *P. sulphuratus*. Further, although Miss E. Snethlage (1935) also described the nest of *P. lictor* as being a domed structure of grass fibers and roots (she gives very little detail about the nest or her observations, merely indicates that it is like the nest of *P. sulphuratus*, but smaller), two other supporting descriptions cited by Davis must be held in some doubt as the possibility of misidentification cannot be excluded in view of remarks that the observers made. For instance, as Davis himself points out, Young (1929) in describing the behavior of what he took to be *P. lictor* clearly has confused it with some other species, likely *Myiozetetes cayanensis*. Young did not identify the latter although it is said to be common where he worked; thus it is almost certain that he did not distinguish between the two species. Davis also draws upon reports given him by C. D. Smooker and includes Smooker's description of the behavior of the birds he identified as *P. lictor*. But this description does not appear to me to refer necessarily to this species.

These reports, however, do come from regions in which *P. lictor* should be found, and while they suggest that the observers did not distinguish between *lictor* and closely related species of similar appearance, they also suggest that if nests of all species were found, then that of *lictor* must resemble those of the other species (or the nest form itself would have provided a means for distinction). The two species with which it was most likely confused in the accounts cited, *P. sulphuratus* and *Myiozetetes cayanensis*, would likely have been building domed nests. Thus while we know for certain from the description of the Penards and Haverschmidt that certain individuals of the species do build an open, cup-shaped nest of coarse materials or grass, it also seems from the report of Miss Snethlage and from the observations of Davis, Young, and Smooker, that other individuals of the species may build a dome-shaped nest of grass or grasslike materials.

In 1959 I spent from 12 May to 15 August on Barro Colorado Island, the Canal Zone Biological Area operated by the Smithsonian Institution in Gatun Lake of the

Panama Canal. I there began a study, still in progress, of the display behavior of the Tyrannidae. Among the several species to which I gave attention were the two species of the genus *Pitangus* as well as four having the same distinctive plumage pattern and coloration. The four other similar-appearing flycatchers were *Megarynchus pitangua*, *Myiozetetes similis*, *M. cayanensis*, and *M. granadensis* (the last does not have as prominent a facial pattern as the rest). Despite their close similarities of appearance, all can be distinguished by visible characteristics, and, furthermore, all can be readily distinguished by their vocal displays. When characteristics of both their appearance and vocalizations are known, it is not possible to confuse any of these species in the field with any of the others. As regards their nests, the *Myiozetetes* species build domed nests of grass and *Megarynchus pitangua* builds an open cup-shaped nest of sticks. The nests of *Pitangus* require more detailed discussion.

While observing *Pitangus lictor* I discovered two nests, both built on dead stumps that project from the surface of the waters in bays on Barro Colorado Island. One was fully exposed on the side of a stump, an open cup of twigs very similar to that described by Haverschmidt (1957) and figured by him in a photograph. The second, however, was a well-formed cup of grasses hidden in a clump of living and dead grass on the top of a stump. The most exposed side of this nest was built up about four cm (one and a half inches) with dead grass stems and down from local grass heads; since the other sides were surrounded by the grasses of the clump, which also closed overhead and concealed the nest from above, the nest had the appearance of being somewhat enclosed. The combined effect of its structure and its positioning was to make the nest intermediate in form between the domed sort and the open sort, and the materials used in its structure (grasses) were of the sort used in the domed nests of other species (and of those domed nests alleged to have been of this species).

The nest of *Pitangus sulphuratus* has, in my experience and in most of the published descriptions that I have been able to locate, been domed and had the appearance of a large and untidy nest of *Myiozetetes*. As are the nests of that genus, it is made of grass or grasslike materials. A fairly detailed description can be found in van Rossem (1914); numerous other descriptions are scattered through the accounts of various men who have collected in the range of the species, and Haverschmidt presents a photograph in his 1957 paper. I am aware of two descriptions of the nest that differ from this.

In Belem, Brazil, de Carvalho (1960) reports that *P. sulphuratus* builds two different forms of nests. One of these is the domed, spherical sort already described. The other has the form of a large open cup. He found two examples of the latter, each placed at the base of a palm leaf (*Mauritia flexuosa*) and built of grasses. De Carvalho points out that these open nests were thus in sheltered situations while the domed nests were built in exposed situations. This is probably relevant to the difference in their form, but two nests of this species that I saw in Panama were placed in fairly large cavities in the trunks of trees and both were of the usual domed form. There is no reason to suppose that the building of open nests in sheltered situations might not occur locally or individually, but the rarity with which it has been reported suggests that its occurrence is exceptional. Kùhlhorn (1953) reports finding in southern Matto Grosso a number of nests of the domed form built of grasses and filaments of the bromeliad *Tillandsia*. He also describes a single example of a nest that differed from these, and he provides a photograph of this nest. It had an inner cup of grasses and *Tillandsia*, but toward the outside this became a layer of interwoven twigs, many of which were thorny. The nest had no roof, and two sides were fully open, while a third side was walled up concavely. A small tuft of material that

could have been a projection upward of some of the lining shows in the photograph on the side opposite the one walled side. Unlike the open nests found by de Carvalho, this nest was built in an exposed position.

Thus, while *Pitangus sulphuratus* usually builds a dome-shaped nest of grasses and other fine materials, some individuals build open nests and may even incorporate coarser materials such as twigs into them. Possibly some demes of the species have the ability to build different nest forms in sheltered or exposed environmental situations. In the closely related *P. lictor*, on the other hand, it may be that the usual nest form is an open cup of coarse materials. From my observation presented above, however, it appears that this species may also build a wall to the nest and perhaps use a natural situation for further concealment. Further, in the nest referred to, the basic material used was grass, and the Penard brothers have also reported the use of grasses. Thus there is some variability in the materials and form of the nest of *Pitangus lictor*, and this variability, so far as it is known at present, is toward the form of a domed nest of grasses. The possibility that such domed nests are built cannot be excluded yet. If they are characteristically built only by some demes and not by others, or even by some members of some demes, then the discrepancies in the observations of different workers would not be surprising. Although the species is reputedly not uncommon along coastal or lowland waterways at least locally within its range, very few nests have been described in the literature, and it is impossible at this time to assess the possibility or extent of local variation.

Finally, as Dr. A. Wetmore has suggested (*in litt.*), there is also the possibility that *P. lictor* might occasionally take over and use a domed nest of another species. This is well worth considering; I have known *Myiozetetes cayanensis* to steal a nest from *M. similis*, and believe that the action may have been related to other patterns of behavior that are found in most of the species mentioned above (this subject is to be discussed in a paper now in preparation). Such an explanation, however, does not exclude the possibility that domed nests and intermediate forms may be built by *Pitangus lictor*.

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Another Nest of *Pitangus lictor*.—Ornithologists have attributed both domed and open nests to the Lesser Kiskadee (*Pitangus lictor*) because they confused it with several other strikingly similar neotropical flycatchers. *Pitangus sulphuratus*, the only one of these flycatchers that reaches the United States, always builds a domed nest. But Haverschmidt (*Auk*, 74: 240, 1957) collected *P. lictor* at an open nest near Paramaribo, Surinam, and thus confirmed the description of the nest by the Penards (*De Vogels van Guyana*, Vol. 2, 263, 1910). Recently Davis (*Auk*, 78: 276, 1961) has claimed that the Penards were mistaken and that the nest found by Haverschmidt was that of *Empidonomus varius*. As did a few other authors, Davis reported domed nests for *P. lictor*.

On 21 May 1961 I found an open nest of *P. lictor* at Buena Vista Point, just north across the Panama Canal from Barro Colorado Island. The thin cup of dry twigs and stems was 1.4 meters up in the twigs of a bush over an inlet of Gatun Lake, separated from second growth nearby by a marshy fringe. One of the three eggs disappeared by 28 May. The two young hatched between 4 and 11 June, and on 18 June were so well feathered that the black and white stripes were evident on their heads. On 25 June the pair greeted me, as always, with buzzy *dzeir* and *dreir*, *dear-ur* calls. Whenever they came near each other, whether in flight or perched, they exposed their bright crown patches and flashed the reddish edges of their primaries by fluttering uplifted wings as both chattered *wip-you* and *wip-wip-wip-you* at the same time. In bushes over the fringing marsh near the empty nest a young bird echoed the calls of its parents with weak *dree*, *uh* notes before it flew off very well. It resembled them in size and plumage, but its tail was only a third grown and the angles of its gape were still brightly colored.

Empidonomus varius does not reach the Canal Zone, and the other local medium-sized flycatchers that resemble *P. lictor* build domed nests (*Myiozetetes cayanensis*, *M. similis*) or nest in holes in trees (*Coryphotriccus parvus*). None are so confined to the edges of quiet inlets as is *P. lictor*, and none forage low over the surface of the water from overhanging branches, sedges, or stubs projecting from the water as does the Lesser Kiskadee.

Hence Haverschmidt and the Penards are quite correct in reporting that *P. lictor* builds an open nest, thus differing from the only other member of the genus. The domed nests reported by Davis are perhaps those of *P. sulphuratus*. As Haverschmidt points out (*Auk*, 78: 278, 1961), the eggs mentioned by Davis fall within the size range of eggs of *P. sulphuratus* rather than that of the eggs of the much smaller *P. lictor*.—EDWIN O. WILLIS, *Museum of Vertebrate Zoology, University of California, Berkeley, California.*

Possible Change in Status of Brewer's Blackbird in Florida.—Brewer's Blackbirds (*Euphagus cyanocephalus*) were observed by the authors during March and early April 1961, on Payne's Prairie, 10 km (six miles) south of Gainesville, Florida. The earliest sighting was on 2 March, when the senior author observed two large flocks, each of 150-200 birds, and several smaller groups. Because the birds could not be approached closely, and since flocks of Red-winged Blackbirds (*Agelaius phoeniceus*), Common Grackles (*Quiscalus quiscula*), Brown-headed Cowbirds (*Molothrus ater*), and Starlings (*Sturnus vulgaris*) were present, his identification was