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NESTING OF THE MANGROVE SWALLOW (*TACHYCINETA ALBILINEA*) IN NESTS OF THE RUSTY-MARGINED (*MYOZETETES CAYANENSIS*) AND SOCIAL (*M. SIMILIS*) FLYCATCHERS

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In March–May 1999, I conducted observations on breeding ecology of Rusty-margined (*Myozetetes cayanensis*) and Social (*M. similis*) flycatchers along the coast of the Barro Colorado Island located on an artificial lake Gatun. The lake was created during the building of the Panama Canal. The island, a nature reserve, has an area of 1642 ha. It is covered mainly with moist tropical forest. A few dozen pairs of Mangrove Swallows *(Tachycineta albilinea)* nested near the island. Nests were placed in cavities of dead trunks, trees and branches emerging from water around the island. Such nest sites are typical of the species although the swallows may breed also in nest boxes (Ricklefs 1971, Dyrcz 1984, Turner 1989). Both flycatcher species build domed nests, made predominantly of dead grasses, with a side entrance. During the study I monitored 97 active nests. In two of them, I found broods of the Mangrove Swallow.

The first one was a nest of the Rusty-margined Flycatcher built on a single, small bush, growing in water some 10 m away from denser shore vegetation. The nest was located at a height of 110 cm above water level. About a dozen or more cm from the nest, there was an active nest of wasps. The first egg of the flycatcher was laid on 28 February. Of 3 nestlings, only one fledged on 7 April. Later, Mangrove Swallows built their own nest in this nest, and lined it with feathers. Egg laying started on 19 April. The clutch comprised 4 eggs; this is also the average value (n = 6) for this species on Barro Colorado in 1979 (Dyrcz 1984). Although hatchability was low in 1979 (62.5%; Dyrcz 1984) all eggs hatched. On 28 May, three young successfully fledged and one was found dead at the nest entrance. At the end of March, about 30 cm from the nest containing Mangrove Swallow brood, a nest of Social Flycatchers was built. One nestling of the Social Flycatcher left this nest at the end of May. So close neighbourhood of the two more or less evenly aged broods of these species seems quite unusual, considering the aggressive behaviour of Mangrove Swallows towards various species (including the Social Flycatcher), observed both in 1979 and 1999 on

Barro Colorado Island.

The second case concerned a nest of the Social Flycatcher, which was built on the trunk of a big dead tree, emerging from water several dozen m off the shore. The nest, supported by the trunk and a huge liana, was placed c. 180 cm above water level. There were a few active wasps nests and a nest of Tropical Kingbirds *(Tyrannus melancholicus)* in the vicinity. Additionally, near the tree top, several active nests of Yellow-rumped Caciques *(Cacicus coela)* were built. The first egg of Social Flycatchers was laid on 27 March. About 10 April, three nestlings disappeared from the nest, presumably taken by a predator. On 20 April, I found in this nest a clutch of 4 eggs of the Mangrove Swallow with an incubating bird on it. This nest was also lined with feathers. The brood was destroyed by a predator about 9 May.

In 1998, along the coast of the Barro Colorado Island, water level was exceptionally low and in many places many dead tree-trunks and branches emerged from water. Many cavities were made available in those trunks and branches for Mangrove Swallows. In 1999, the situation was totally different. Water level was high and only single trunks emerged. Therefore, we may suspect that the shortage of breeding places forced Mangrove Swallows to breed in nests of tyrant flycatchers. Flycatchers nests seem to be much less safe place for breeding than a natural cavity. The described nests of Mangrove Swallows were placed near wasps nests, and one of them was in the vicinity of aggressive birds nesting nearby. Presumably, this increases brood safety. The inside of nests of both tyrant flycatchers is larger compared to many natural cavities normally used by the Mangrove Swallow (unpub.). This may be beneficial enabling laying of larger clutches. According to Stewart & Robertson (1999), Tree Swallows *(Tachycineta bicolor)* lay smaller clutches in smaller nest boxes than in bigger ones. The microclimate of the nests of tyrant flycatchers described in this study must differ from that of natural cavities of Mangrove Swallows, however there is no such data.

As far as I know, this is the first report of Mangrove Swallows nesting in domed nests of tyrant flycatchers.

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