

## WINTERING PEREGRINE FALCONS (*FALCO PEREGRINUS*) IN THE PERUVIAN AMAZON

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**Halcones peregrinos (*Falco peregrinus*) invernando en la selva amazonica peruana.**

**Key words:** *Falco peregrinus*, Peregrine Falcon, Peru, Pucallpa, wintering behavior.

In spite of very large migratory populations of Peregrine Falcons (*Falco peregrinus*) in the Holarctic, extremely little is known about their winter ecology in the Nearctic, few notable exceptions are Albuquerque (1988) and references therein, Silva e Silva (1996, 1997), and White (2006). This surprising scarcity of published knowledge on the wintering habits of thousands of Nearctic peregrine pairs (White 2006) was my motivation to write this note.

I watched three presumably wintering peregrines in Pucallpa on the Peruvian Amazon. Pucallpa (08°23'S, 74°33'W) lies at an elevation of 150 m on the Ucayali river, the main branch of the Amazon river in Peru. It is a typical jungle town of about 450,000 inhabitants, flat, widely spread out and with its single tallest building only about 25 m high. However, there are at least a dozen TV/radio antenna pylons, each approx. 50 m high. It was on four of these that all my observations were made at a distance of 60 to 200 m, and using a 20 x 60 Nikon spotting scope. I watched an adult pair daily from 23 to 28 March 2005, and a single adult, probably male

bird, from 26 to 28 March 2005. Despite their limited duration of 5 h and 40 min, these observations contain important information on the daily activity cycle, hunting behavior, pair bond and territoriality of wintering Peregrine Falcons in the Neotropics.

The daily activity cycle appeared strikingly constant and consisted of dozing and hunting. The pair used three antenna pylons in the town center some 60 and 100 m apart from each other. One of those had several large parabola antennas and a platform close to its top. Here the pair could be found every time I went to see them (which was several times a day). There was copious whitewash on the upper parts of the pylon suggesting a prolonged stay. The single bird was found frequently on another pylon some 500 m distant from the other three. Two observations were striking: During the day, all three birds were frequently observed dozing with their lids closed. They were remarkably well hidden behind the metal structures. Even the single bird on a pylon almost devoid of any complex structures such as parabola antennas was fairly difficult to spot even with a telescope.

Thus the falcons were inactive during the day and seeking shadow. In contrast, around sunset, the behavior of the pair suddenly changed radically when they started hunting small bats (I did not observe the single bird hunt in the evening). The pair would move from the pylon with the parabola antennas and the platform to the two other pylons with more exposed perches, and just drop down to about 5–10 m height to pursue bats almost at street level. Once, the male made nine apparently unsuccessful stoops within only 9 min.

The pair seemed strongly bonded as, during the day, they were always seen perching only 2–5 m apart. I watched them hunting synchronously, and at least once also hunting the same bat together. At another instance, when the female hopped onto the platform on the main pylon where the pair spent the day, one bird uttered a few *eee-chupp* calls, i.e., the call usually given during courtship encounters. Agonistic behavior was also recorded; once the female displaced the male from its hunting perch. The pair did not seem to be strongly territorial, since the third individual was tolerated within 500 m. This latter fact is also part of the evidence for a northern, migrant status of these peregrines (see below). In contrast, the female once attacked an Osprey (*Pandion haliaetus*), another wintering species, that flew by some 100 m from where the peregrines were perched and pursued it until out of sight. Also, in spite of very large numbers of Black vultures (*Coragyps atratus*) in town, only very few or none were ever seen perched on the pylons used by falcons. Those seen were always perched in the lower parts while, on other pylons without falcons, 1–2 dozens of vultures could be seen on the top of the pylons. Perhaps the peregrines defended their pylons against the vultures (or alternatively, they chose pylons little used by them).

Finally, it must be pointed out how astonishingly different the likely summer habitat of

these falcons must be from the wintering habitat. Assuming an origin in the northern Nearctic, they must experience a radical change in, among others, temperature and rainfall regimes, proximity to humans, and prey. While they may seek sunny perches in the North, they avoid them in the South. They may nest in a region where they hardly ever see any humans, while in the South, they are totally oblivious of the human presence even very close by. This last point is much more striking still in the Lima/Peru area where wintering Peregrine Falcons can frequently be seen on advertisement boards sometimes only 12 m above the Panamericana Highway, where tens of thousands of cars pass by underneath them every day (O. Beingolea & M. Kéry pers. observ.).

It is very likely that all three birds were wintering birds from the northern Nearctic rather than local Peruvian birds. This diagnosis is based on plumage details, the absence of intraspecific territorial behavior, and the lack of more pronounced courtship behavior. The plumage of all three birds was similar to that depicted in Plates 22 and 26 in Cade *et al.* (1988). Although the moustache was relatively broad and there was no pale region on the nape, the rest of the underside had only few markings and there were no markings at all on the upper chest and mostly spots rather than bands below that. There were only a few bands on the side of the breast. The underside of the female was pale yellow-sand colored, while that of the two presumptive males was almost pure white. In contrast, typical Peruvian Peregrine Falcons [I saw falconry birds and local nesters near Lima and elsewhere in Peru, also see Kéry (2002)] are much more warmly colored on the underside and darker above. In addition, peregrines nesting in the Andean foothills near Lima start egg-laying in late April (O. Beingolea pers. com.). If the Pucallpa birds were local nesters and had the same annual cycle, they would be

expected to show much more courtship behavior and would probably not tolerate a conspecific at only 500 m. Northern peregrines wintering on the coast around Lima leave around mid-April (O. Beingolea pers. com.), as do those wintering in Brazil (Silva e Silva 1997). Hence, it seems likely that I was watching northern peregrines towards the end of their wintering period.

My observations concur with those made by Albuquerque (1988) and White (2006) in Southern Brazil. These authors also observed wintering birds that were paired (or at least one male and one female together) and showed behavior both with some elements of courtship, but also agonistic encounters. However, Albuquerque describes them as establishing their hunting ranges about 800 m apart. In this respect, the Pucallpa birds were quite different; they perched as close as resident nesting pairs do early in the breeding season (M. Kéry pers. observ.). Silva e Silva (1997) reports similar observations as well: wintering birds in Santos were active for hunting in the early morning and at night, and inactive and in the shade in between. A pair was staying close together and some courtship was also observed. Similar observation have even been made on migration: in Recife, Brazil, in November 2001 and 2002, a pair was observed during what seemed to be a 1-week stopover (Cajo Jose Carlos pers. com.). That pair hunted together in the early morning and at sunset. The striking degree of cohabitation of wintering peregrines with man for South America has also been pointed out by Silva e Silva (1996) and White (2006). J. L. B. Albuquerque (pers. com.) pointed out that the same activity cycle, with hunting early and late in the day and inactivity in between, may also be observed in arid regions of the Northern hemisphere and hence is not unique to Neotropical regions.

Surveys of breeding peregrines in South America are complicated by the fact that late

wintering and the early phases of the breeding cycle overlap (O. Beingolea pers. com.; for Peru, see also Kéry 2002). The observations reported here clearly bring home the message that the observation of a pair, even when staying at the same place for a prolonged period, is not sufficient to conclude that they are resident breeders. Care is needed before a pair can be assumed to be local South American when observed before mid-April.

Currently, South America is arguably the most exciting continent for the study of peregrine breeding distribution. Relatively little is still known and, for instance in Peru, more and more pairs have lately been discovered and yet huge areas still remain totally unsurveyed (O. Beingolea pers. com.). A better knowledge of the winter ecology of the northern migrants is essential not only for a better understanding of these northern, but also of the local South American populations.

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