

Prey items of migratory peregrine falcon (*Falco peregrinus*) and Eurasian kestrel (*Falco tinnunculus*) on Guam.

DANIEL S. VICE*

USDA/APHIS/WS, 1060 Route 16, Suite 103-C,
Barrigada Heights, GU 96913, USA

AND

DIANE L. VICE

Guam Department of Agriculture, Division of Aquatic and Wildlife Resources,
192 Dairy Road, Mangilao, GU 96923, USA

The Mariana archipelago, located equidistant from Papua New Guinea, the Philippine Islands, and Japan, serves as a stopping point for migratory and wintering shore birds, most notably Pacific lesser golden plovers (*Pluvialis dominica fulva*) (Stinson et al. 1997b). Migrant land birds, including raptors, appear much less frequently in the Mariana Islands (Williams & Williams 1988, Stinson et al. 1997a); although not geographically isolated as other Pacific island groups, Kuroda (1961) felt the Mariana chain is too far south of continental land masses for most Asian migratory land birds to reach. Rare island records for land birds are notable, as they may partially explain patterns of distribution and origin of insular endemics (Steadman 1992, Stinson et al. 1997a), such as the potentially established population of common buzzard (*Buteo buteo*) in the sparsely inhabited northern Mariana Islands (Reichel et al. 1994). A small number of other migrant raptors have been previously documented in the Marianas (Stinson et al. 1997a, Wiles et al. 2000), but to date, there have been no reports of prey taken by migrant raptors.

The migratory season and winter of 2001 provided a variety of raptor sightings on Guam, the largest island in the Mariana chain. Most notably, numerous sightings of a male Eurasian kestrel (*Falco tinnunculus*) and female peregrine falcon (*Falco peregrinus*; Figure 1) occurred over a three-month period between January and March 2001. Both birds are considered accidental visitors to Guam, with very few records for either species. Most sightings during 2001 occurred in close proximity to the Guam International Airport, where an abundance of introduced and native birds (Vice & Pitzler 1999) and numerous perch sites make the airfield an attractive location for migrant raptors. Although the identity of individual birds could not be confirmed, both falcons, in adult plumage, were repeatedly seen in the same perch and foraging

*Corresponding author

locations, indicating there was only one individual of each species present. The peregrine was not positively identified to race, as the extensive black pattern on the head, nearly black back, and rust-tinged feathers along the chest and belly are found on several different races, including the western North American and non-migratory Fijian races (Figure 1; Pratt et al. 1987). The authors have not found any other records of photographically documented peregrine falcons in the Mariana Islands.

Both birds were relatively tolerant of human presence and allowed close observation when perched and hunting; this behavior afforded observation of a number of successful and unsuccessful predatory events. The authors have not found any other records of photographically documented peregrine falcons in the Mariana Islands.

Most observations of the peregrine occurred in close proximity to an instrument landing tower at the airport; the bird often used the tower as a perch, initiating predatory attacks from the site. Introduced Philippine turtle doves (*Streptopelia bitorquata*) were the most commonly taken prey by the peregrine (n = 14). Other observed prey included native yellow bittern (*Ixobrychus sinensis*; n = 4) and white tern (*Gygis alba*; n = 1), introduced black francolin

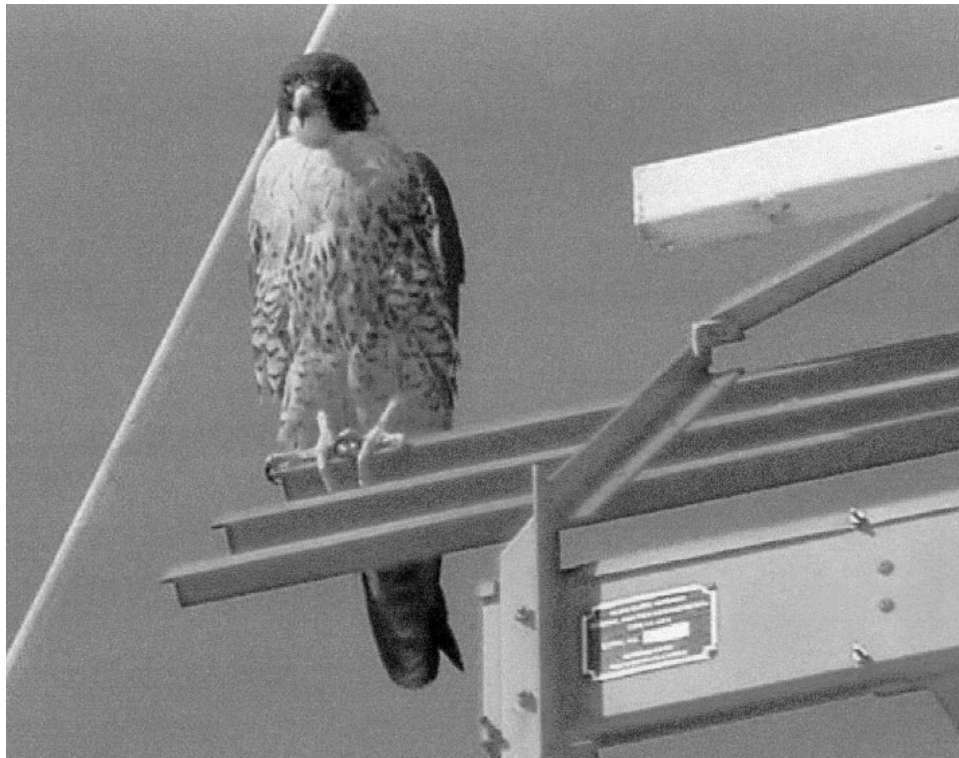


Figure 1. Peregrine falcon perched on antenna at the Guam International Airport, February 2001.



Figure 2. Pacific lesser golden plover killed and partially eaten by a peregrine falcon at the Guam International Airport, February 2001

(*Francolinus francolinus*; $n = 1$), and migrant Pacific lesser golden plover ($n = 1$). Typical of a falcon kill, avian prey were stripped of breast muscle tissue, partially eviscerated with the lower gastrointestinal tract remaining, left with intact wings, and occasionally decapitated (Figure 2). Unsuccessful predatory stoops and chases were observed on doves, bitterns, and white terns. On one occasion, a group of six white terns was observed mobbing the falcon following an unsuccessful dive by the peregrine on a tern.

The Eurasian kestrel was observed taking adult Eurasian tree sparrows (*Passer montanus*) on two separate occasions. The kestrel, which generally preys upon insects, small birds, and small mammals in its Asian breeding range, was also observed making numerous unsuccessful chases and dives on doves, bitterns, and plovers, all of which were likely too large to effectively handle as prey. A majority of the kestrel observations ($n = 12$) occurred inside and adjacent to an abandoned aircraft hangar at the Guam International Airport, where tree sparrows were found in abundance.

These observations provide the first documentation of prey items taken by migratory raptors in the Mariana Islands. The frequency and relative success of predatory events indicate both birds were in good health, capable of return migratory trips. The frequency of visits by peregrines seems to be increasing, as single birds have been observed on Guam during each winter between 2000 and 2003. The cosmopolitan peregrine breeds throughout Asia and North America and wanders extensively throughout the Pacific region; repeated migratory events may eventually lead to the expansion of the falcon's breeding range.

Acknowledgements

P. Aguon, J. Flores, and J. Benevente provided details on many field observations. G. Wiles provided helpful comments on the manuscript.

References

- Jenkins, J. M. 1983. The native forest birds of Guam. Ornithological Monographs No. 31. 61 pp.
- Kuroda, N. 1961. The over-sea crossings of land birds in the western Pacific. Bulletin of the Yamashina Institute Ornithological Zoology 36:47–53.
- Pratt, H. D., P. L. Bruner & D. G. Berrett. 1987. The birds of Hawaii and the tropical Pacific. Princeton University Press. 409 pp.
- Reichel, J. D., P. O. Glass & D. W. Stinson. 1994. Status of the common buzzard (*Buteo buteo*) in the Northern Mariana Islands, Pacific Ocean. Emu 94:53–55.
- Steadman, D. W. 1992. Extinct and extirpated birds from Rota, Mariana Islands. Micronesica 25:71–84.
- Stinson, D. W., G. J. Wiles & J. D. Reichel. 1997a. Migrant land birds and water birds in the Mariana Islands. Pacific Science 51:314–327.
- Stinson, D. W., G. J. Wiles & J. D. Reichel. 1997b. Occurrence of migrant shorebirds in the Mariana Islands. Journal of Field Ornithology 68:42–55.
- Vice, D. S., and M. E. Pitzler. 1999. Management of the yellow bittern (*Ixobrychus sinensis*) on Guam to minimize threats to aviation safety. Proceedings of the Birdstrike Committee North America 1:133–138.
- Wiles, G. J., D. J. Worthington, R. E. Beck, Jr., H. D. Pratt, C. F. Aguon & R. L. Pyle. 2000. Noteworthy bird records for Micronesia, with a summary of raptor sightings in the Mariana Islands, 1988-1999. Micronesica 32:257–284.
- Williams, T. C. & J. M. Williams. 1988. Radar and visual observations of autumnal (southward) shorebird migration on Guam. Auk 105:460–466.