

late February (A.K. Fisher 1893, USDA Div. Ornithol. Mammal., Bull. 3, Washington, DC U.S.A.). Carrion feeding by red-tailed hawks may be more prevalent than food habit studies suggest, particularly in winter in locations where favored prey become scarce. However, it remains unclear when carrion becomes acceptable as food to red-tailed hawks. Red-tailed hawks in Arkansas concentrated winter feeding activities around poultry farms where carrion (dead chickens) was readily taken (D. James pers. comm.). However, fresh carcasses located near nests were never used by Alaskan red-tailed hawks, even during food shortages (C.M. Lowe 1978, M.S. thesis, Univ. Alaska, Fairbanks, AK U.S.A.). Red-tailed hawks apparently have a remarkable capacity for modifying their diet to accommodate local prey including carrion. In addition to stomach and pellet content analyses, field observations of feeding red-tailed hawks can shed some light on the types of food red-tailed hawks or other raptor species will take when prey are scarce.

We thank Jim Lish, Charles Preston, and Karen Steenhof for helpful suggestions on an earlier draft of this manuscript and John Couch, Doug James, Marcus Koenen, John Shackford, and Don Wolfe for discussions on red-tailed hawk food habits.—**Steven R. Sheffield and Noble Jobe, Department of Zoology, Oklahoma State University, Stillwater, OK 74078 U.S.A.** Present address of Sheffield: Department of Environmental Toxicology, Clemson University, P.O. Box 709, Pendleton, SC 29670.

*J. Raptor Res.* 30(1):44

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#### FRUIT-EATING BEHAVIOR OF A BARRED FOREST-FALCON

Barred forest-falcons (*Micrastur ruficollis*) are known to prey on reptiles, birds, amphibians, small rodents, and insects (L. Brown and D. Amadon 1989, Eagles, hawks, and falcons of the world. Wellfleet Press, Seacacus, NJ U.S.A.; R.K. Thorstrom et al. 1991, *Condor* 92:237-239; R.K. Thorstrom 1993, M.S. thesis, Boise State Univ., Boise, ID U.S.A.). I am unaware of any published record of this species feeding on fruits. Here, I describe two observations of fruit eating by an incubating female barred forest-falcon in Guatemala.

While studying a population of barred forest-falcons in Tikal National Park, Guatemala (17°13'N, 89°36'W), I observed the same female on 24 April 1989 and 14 April 1991 after she left her nest cavity. On both occasions, after preening for 2 min, the falcon flew to the ground and immediately began feeding on the small fallen fruits of a palo de tzol tree (*Tikalía (Blomia) prisca*). The bird fed for approximately 1 min during each observation. After it finished feeding it flew to a perch near the nest, rested briefly, then flew back into the nest cavity. This fruit-eating behavior occurred at 1–2 wk after egg laying.

Among Falconiformes, frugivory has been documented in swallow-tailed kites (*Elanoides forficatus*; W.H. Buskirk and M. Lechner 1978, *Auk* 95:767–768; T.O. Lemke 1979, *Condor* 81:207–208.), and in a number of diurnal scavenging species including the genera *Milvus*, *Gypohierax*, *Phalcooboenus*, *Polyborus*, *Daptrius*, and *Milvago* (L. Brown and D. Amadon. 1989. Eagles, hawks, and falcons of the world. Wellfleet Press, Seacacus, NJ U.S.A.). Frugivory may be more common in tropical forest raptors than the few reports indicate, but because of dense forest structure and the secretive behavior of most species, it is difficult to observe.

#### ACKNOWLEDGMENTS

These observations were collected as a part of the Maya Project, a multi-year research effort being conducted in Guatemala by The Peregrine Fund, Inc. in cooperation with the Instituto Nacional de Antropología y Historia (IDAEH), Centro de Estudios Conservacionistas (CECON), Guatemala, and Consejo Nacional de Areas Protegidas (CONAP), Guatemala. I thank Rogel Chi Ochaeta, Acting Administrator, and the other staff of Tikal National Park, Guatemala. I owe a special thanks to William Burnham, David Whitacre, J. Peter Jenny, and Lloyd Kiff of The Peregrine Fund, Inc. for their support, suggestions and assistance.—**Russell Thorstrom, The Peregrine Fund, Inc., 5666 West Flying Hawk Lane, Boise, ID 83709 U.S.A.**