this population stops in some sites during the night to rest. Their migration starts in Alaska during late August; they have been recorded along the Pacific coast of southern Canada and the northern United States at the beginning of September and in California during late September and the first days of October. The new records from the western coast of Mexico were in late October. It is possible that this species was not formerly reported because of the short time spent on the Mexican coast and their preference for migrating off shore. The occurrence during the same time period in three different years suggests that immatures and at least some adults of *Sterna paradisaea* may be regular fall migrants along the Pacific coast of Mexico.

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Swainson's Hawk predation on dragonflies in Argentina.—Swainson's Hawks (*Buteo swainsoni*) have a diverse diet consisting of mammals, birds, reptiles, amphibians, and a wide array of invertebrates (Bent 1937, Dunkle 1977, Schmutz et al. 1980, Bednarz 1988, Steenhof and Kochert 1985). A number of observations document extensive feeding on invertebrates, including crayfish (White 1966), crickets (White 1966), grasshoppers (Bent 1937, Taylor 1946, Woffinden 1986), and dobsonflies (Bent 1937). Predation on invertebrates generally involves flocks of Swainson's Hawks preying on aggregations of invertebrates. Here we report on Swainson's Hawk predation on invertebrates in Argentina that was notable because of the taxon involved and the magnitude of the event.

On 17 December 1991, we observed an aggregation of dragonflies (Odonata, Anisoptera) approximately 6 km NE of San Clemente del Tuyu, Province of Buenos Aires, Argentina. The location is approximately 1 km from the coast, and the habitat is a mosaic of salt marsh, freshwater marsh, and pampas. When first observed at a distance of 2–4 km, we thought the dragonfly aggregation was smoke from a grassfire. The aggregation was moving north in association with a weather front that passed our position coincident with the passage of the dragonflies. The wind shifted from the north (40 kph) to the south (30 kph), and the ambient temperature dropped approximately 6–8°C. We estimated the aggregation to be approximately 1000 m in diameter and in excess of 500 m in height. Ground velocity of the aggregation was estimated at 12–15 kph. The density of individuals within the aggregation was estimated at 10–15/m^3 in the lower portion of the column, and declined only minimally until near the upper limits. The calculated number of dragonflies based on these estimates is 3.9–5.9 $\times$ 10^9 individuals.

Associated with the dragonflies were 200–300 Swainson's Hawks foraging actively in the upper portions of the aggregation. Many individuals were soaring at great heights above the aggregation. The hawks captured dragonflies by soaring into the aggregation and seizing individuals in their talons. They would then proceed to feed on the dragonflies while soaring and maintaining pace with the rapidly moving aggregation. This foraging behavior is similar to accounts of Swainson's Hawks preying on grasshoppers (Woffinden 1986), dobsonflies, and unidentified insects (Bent 1937).

Prior to the passage of the dragonflies, occasional Swainson's Hawks were observed for-

aging in the area. These hawks appeared to ignore the numerous dragonflies present over the marshes and appeared to be hunting for vertebrates in the surrounding grasslands. The hawks presumably switched to predation on dragonflies when these became superabundant and easily available in the aggregation. The number of hawks feeding on dragonflies compared to the density present in the general area prior to the dragonfly arrival suggests that hawks had been recruited to the dragonfly aggregation from several hundred km^2.

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LITERATURE CITED

BEDNARZ, J. C. 1988. A comparative study of the breeding ecology of Harris' and Swainson's hawks in southeastern New Mexico. Condor 90:311–323.

BENT, A. C. 1937. Life histories of North American birds of prey. (Pt. 1) U.S. Natl. Mus. Bull. 167.

DUNKLE, S. W. 1977. Swainson's Hawks on the Laramie Plains, Wyoming. Auk 94:65–71.

SCHMUTZ, J. K., S. M. SCHMUTZ, AND D. A. BOAG. 1980. Coexistence of three species of hawks (*Buteo* spp.) in the prairie-parkland ecotone. Can. J. Zool. 58:1075–1089.

STEENHOF, K. AND M. N. KOCHERT. 1985. Dietary shifts of sympatric buteos during a prey decline. Oecologia 66:6–16.

TAYLOR, W. P. 1946. Swainson's Hawks working on grasshoppers again. Condor 48:95.

WHITE, C. M. 1966. Notes on the food of the Swainson's Hawk. Kansas Ornith. Soc. 17:10.

WOFFINDEN, N. D. 1986. Notes on the Swainson's Hawk in central Utah: insectivory, premigration aggregations, and kleptoparasitism. Gt. Basin Nat. 46:302–304.

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The White-faced Swift in Jalisco, Mexico.—Recently, Navarro et al. (Wilson Bull. 104: 55–64, 1992) described a new species of swift of the genus *Cypseloides* based on four specimens collected in the mountains of Guerrero and Michoacán in southwestern Mexico. The White-faced Swift (*Cypseloides storeri*) is very similar to the White-chinned Swift (*C. cryptus* of Central and South America, but differs most obviously in having a broad white frosting on the forehead, lores, and chin; in having whitish as opposed to sooty postorbital feathers; and in the gradually tapering as opposed to more abrupt shape of the face (Navarro et al. 1992). A fifth specimen (deposited at the Colección Zoológica, Laboratorio Natural Las Joyas, LNLJ) was found dead along the Las Joyas stream during the rainy season (June–September 1990) at the Univ. de Guadalajara's "Estación Científica Las Joyas" in the Sierra de Manantlán Biosphere Reserve, Autlán, Jalisco. The site (19°36′N, 104°18′W) is at approximately 1800 m above sea level. The dominant vegetation is pine-oak forest, and the most common tree species are *Pinus douglasiana* and *Quercus elliptica*, followed in abundance by *P. oocarpa*, *Q. acutifolia* and *Q. glaucescens* (L. Sánchez, pers. comm.). The site is approximately 100 m downstream from a waterfall from where other swifts, presumably of the same species, have been flushed on other occasions. The specimen is unsexed with