

Brief Natural History of the Peregrine Falcon and Account of a Predation Event on a Bat in the Grand Canyon, Arizona

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The Peregrine Falcon is a species recovering from a very long stint on the Endangered Species List. Officially listed in 1970 to the Endangered Species Conservation Act of 1969, declines were attributed to DDT poisoning and eggshell thinning in the 1950s and 1960s. The banning of DDT in the 1970s and the release of over 6,000 reared falcons by The Peregrine Fund's captive breeding program paved the way for a remarkable recovery. The Peregrine was taken off the Endangered Species List on August 25th, 1999 (Mesta 1999). Since delisting, population numbers have continued to grow (USFWS unpublished data).

Peregrines require tall cliffs in excess of 150 feet and a source of water, which likely correlates to adequate prey availability, usually various waterfowl (Johnsgard 1990). Both these habitat requirements are met along the Colorado River in the Grand Canyon, which supports one of the largest populations of Peregrines in the lower 48 states (Brown et al. 1991, Brown et al. 1992).

Peregrines take avian prey almost exclusively (96%) (Sherrod 1978). White-throated Swifts (*Aeronautes saxatalis*) and various waterfowl make up the majority of the Peregrines' diet (Brown 1991). One analysis of a Peregrine Falcons' diet in the Canyon, conducted by David H. Ellis, included 44 prey items which consisted of 25 White-throated Swifts, nine Mourning Doves, four Pinyon Jays and one individual of six other species. Waterfowl have always been present in the Grand Canyon but since 1963, there has been an observed increase in waterfowl populations (Brown and Stevens 1997). One member of our group witnessed a Peregrine Falcon taking a small, unidentified duck between Lee's Ferry and Phantom Ranch.

On March 21, 2005, at 18:55 near river mile 108, a Peregrine was seen circling over our camp, actively hunting. Consistent flight at about 50' precluded a sharp swoop down toward an unseen prey item in a small drainage adjacent to the camp. Unsuccessful, the Peregrine flew straight toward the sky to resume flight at about 50' in search of more

prey. Circling over the river, the bird swooped down over the surface of the water, knocking a bat to the surface. It quickly turned around to claim its prey and flew over a nearby ridge, out of sight. While Peregrine Falcons have been documented to opportunistically prey on bats (Sick 1961, Baker 1962, Pierson and Donahue 1983, Sherrod 1983, Byre 1990), to our knowledge, Peregrine predation on bats has not been documented in the Grand Canyon prior to this account.

Bats were seen around camp up to an hour and a half prior to the Peregrine sighting, many of which were seen over the water's surface. A White-throated Swift was observed in the area immediately following the Peregrine sighting, perhaps signifying a preference for bats. More likely, the bats were a better prey option due to their abundance relative to Swifts; however, it is also possible that the Peregrine may simply have never seen the swift.

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