

## **Food Habits**

### **Diet**

The cave swallow is an opportunistic feeder on small to medium-sized flying insects. No extensive food-habit studies have been conducted. Birds at Carlsbad Caverns have been found to capture a wide variety of prey items during the nesting season. Insects observed being carried by mist-netted birds include: short-horned grasshoppers, seed bugs, assassin bugs, aphid, green lacewings, ladybird beetles, flies, whites, moths, wasps, bees and ants.

Witmore (US Department *Agricultural Bulletin*. 326: 1 – 140, 1916) examined 36 stomachs from December and April through August in Puerto Rico and found a wide variety of prey items. Insects were of four orders, with Orthoptera the prevalent form. At least 22 different species were found, with engraver beetles the most abundant species. Other orders included Hemiptera, Diptera and Hymenoptera. Beetles were found in less than fifty percent of all stomachs, flies in sixteen percent, and ants in ten percent. Beatty and Danforth (Puerto Rican ornithological records. Department of Agriculture. Puerto Rico 15: 22 - 106) reported that a bird taken in Puerto Rico had mainly nymphs of aquatic bugs and darkling beetles. Gravel, pieces of a small shell (Wetmore 1916) and a rock the size of a small marble (Oberholser. 1974. *The Bird Life of Texas*, 2 vols., University of Texas Press, Austin) have also been found.

### **Microhabitat for Foraging**

The cave swallow usually feeds in open areas but also in open vegetation and against cliff faces. Birds forage at a variety of heights up to 100m, lower in cloudy weather and often over water.

### **Food Capture and Consumption**

Usually in loose flocks, cave swallows feed throughout the day. During the nesting season, adults forage most actively in the early hours of the morning and in the late afternoon, less intensely throughout remainder of the day. They spend most of the time in the area of the natal site. After nesting, birds often vacate the natal site, except for roosting. Individuals have been noted flying into foliage of a blooming western soapberry tree, flushing large numbers of moths, then circling back and taking the scattered insects.

Nesting colonies may serve as an information center. Observations at Carlsbad Caverns, show rapid dispersal of large segments of the colony followed by loafing around cave site, followed by irregular dispersal events. Except when gathering food for nestlings, birds consume food as they take it. They generally gather food as they hunt in small groups around the cave entrance. Away from the entrance, feeding groups are often larger. Adults carry insects back to nestlings in their beaks.

### **Drinking**

The cave swallows usually drink in flight while skimming the surface of water, generally deep pools or rivers. The cave swallow extends its mandible to just below the water surface. It swallows water by raising its head and adjusting the angle of flight.

### **Defecation**

There is little noted on defecation rates. Birds often defecate when alarmed or when flushed from the nest. In band studies in New Mexico, birds rarely defecate when they hit a mist-net, but twenty-five percent do upon being released.

### **Pellet-casting**

Has not been noted.

### **Food storage**

There is no evidence of food storage.

### **Nutrition and Energetics**

There is no information available on nutrition and energetics.

### **Metabolism and Temperature Regulation**

There is no information available on metabolism and temperature regulation.