

near enough to see that it contained two young. These young were well covered with down and I should say they were about two weeks old. We hurried from the mountain so as not to disturb the nest any more and also in order to reach the bottom before dark. I can find no reference in literature to such an incident, but such encounters may be more frequent than we think.—J. SOUTHGATE Y. HOYT, *Cornell University, Ithaca, New York.*

Hunting strategy of Pigeon Hawks.—Since the Western Pigeon Hawk (*Falco columbarius bendirei*) is not a common bird, to see six of them within about two hours is in itself an ornithological thrill. However, the activities of these particular birds more than doubled the worth of the experience.

In the late afternoon of February 2, 1942, I left Nogales, on the Arizona-Sonora border, for Guaymas by train. With me was Ken Stott of San Diego, a reliable bird student in whose company I have often been afield. About an hour and a half before sunset, as we were clattering through a valley that was of Upper Sonoran character, we noticed a dark, swift-flying little hawk approaching the train at an oblique angle. When it had approached to within about fifty feet of us it straightened its course and, with swift, steady wing beats, remained opposite our window for perhaps twenty seconds. Then, with a sudden spurt of speed it shot into a parabolic climb. Fascinated by the energetic grace of the bird, I kept my gaze fixed upon it, with the result that when it suddenly threw its feet forward and snatched a small bird in midair I was almost as surprised as the victim! There followed a moment in which the hawk recovered its poise and the little bird struggled its last. Then the Pigeon Hawk drew sharply away from our moving window and at the same time lowered and raised its legs several times, apparently driving its talons repeatedly through vital parts of its prey.

About ten minutes later, while the picture of this swift drama was still vivid in our minds, we found that a second intent and speedy Pigeon Hawk was abreast of our car. We were in the third one back from the locomotive and evidently at the strategic point that is chosen by these wily hunters. Like his predecessor, this hawk suddenly accelerated his speed. This time I anticipated his direction sufficiently to see two small birds stop suddenly in full flight and drop like inanimate bodies into a mass of thorny scrub below. Frustrated, the hawk swung sharply upward and in a gliding arc returned to his vantage point near our car. Less than half a minute later, a swift forward lunge netted him a small bird. With this hanging motionless in his clutches he passed directly over us and out of sight beyond some leafless sycamores to the west.

Now we kept a constant vigil by the windows on both sides of the car, which fortunately was nearly empty. Five minutes later a third Pigeon Hawk appeared. It repeated almost exactly the manoeuvres already described, except that it missed two kills and switched from one side of the train to the other before finally bringing a bird into its grasp. Three more of the hawks and three more similar performances were observed in the course of the next three-quarters of an hour. The last bird missed more kills than had the earlier ones and apparently gave up without success when the dusk had deepened into near blackness.

We concluded that the six hawks were different individuals, since they were seen at intervals ranging from approximately five to fifteen minutes. The train travelled at a speed of approximately forty miles an hour, as nearly as we could judge. At this rate it would hardly seem probable that a single bird could make more than one appearance.

The strategy of the hunting Pigeon Hawks seemed quite apparent. They took advantage of the fright induced among small birds along the track by the noisy and swiftly moving locomotive. They hung back several cars from the front of the train, thus allowing the attention of their intended prey to become entirely focused in one direction. Then, as the small birds hurried away from the tracks, without thought of any aerial attack, they became the easy victims of as skillful a flier as the Pigeon Hawk. The nearness with which three of the Pigeon Hawks approached the side of the train, flying just outside our window, made identification certain; while the size, dark color and manner of flight of the others seen at greater distances dispels any doubt from my mind as to their identity.—KARL W. KENYON, *La Jolla, California*.

A hummingbird feeding habit.—On September 13, 1941, a female Ruby-throated Hummingbird was observed to hover before several spider webs, which it visited successively, and to feed upon several small insects entrapped therein. The webs were located at a height of about ten feet in the dead branches of small trees situated at the edge of a swamp. They seemed to be undamaged by the operation. The observation was made along the Potomac River near Alexandria, Virginia. No showy blossoms of the types usually frequented by hummingbirds were seen in the vicinity and no spiders were evident at the webs.—GEORGE A. PETRIDES, *National Park Service, Washington, D. C.*

Coöperative feeding of White Pelicans.—On June 28, 1941, the writers were privileged to witness an effective coöperative feeding venture of twelve White Pelicans in Blitzen Valley at Malheur National Wildlife Refuge, Oregon. Observation was made from a commanding position on top of volcanic 'Rim Rock,' which rises almost perpendicularly some sixty feet above the valley floor. When first observed, the birds were loosely grouped and leisurely swimming about the small pond that is a unit of a larger impounded body of water. The pool is some fifty or sixty feet from the observation point; consequently, from their elevated position the writers could see into the water and observe very clearly the movement of the birds.

It appeared that a school of fish swam into the pool through a connecting area leading from the larger body of water. Suddenly the birds assumed a circular position, surrounding the school. All the pelicans moved slowly but cautiously toward the center of the circle, their heads near the surface of the water or partly submerged and their necks slightly extended. The birds moved in perfect unison, making the circle progressively smaller, and ready to engulf their helpless victims at the first opportunity. When all twelve pelicans were close to the fish, the birds made rapid jabs at the fish and apparently consumed a large number of them. It appeared that every bird got from one to several fish. The degree of dexterity and the rapidity of movement of these large, awkward-appearing creatures were surprising. The birds seemed to know instinctively that coöperation materially benefited each individual.

Coöperative action in obtaining foods is probably much more prevalent than has been recorded for aquatic birds. Occasional instances have been observed at the Bear River Marshes in Utah of White Pelicans doing the actual herding of fish, the Forster's Terns and California Gulls flying overhead and darting down to pick up small carp and chub which the pelicans missed or forced to the surface. Avocets and, to a lesser extent, the Black-necked Stilts, also band together for coöperative drives on small fry and aquatic insects. Such drives are made in water of wading