

**Cotton Rats, *Sigmodon hispidus*, as
Food of Channel Catfish, *Ictalurus punctatus*¹**

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The diet of the channel catfish, *Ictalurus punctatus* Rafinesque, has been the object of many research studies (for selected references see Riggs, 1958). These studies have shown that the channel catfish has a highly varied omnivorous diet. Occasionally, small mammals have been mentioned as a miscellaneous food item of channel catfish (Denny, 1946 and Harrison, 1956). Forbes and Richardson (1920) reported the miscellaneous food of channel catfish from the Illinois and Mississippi Rivers included "stillhouse slops, pieces of ham, a dead rat and other animal debris". Buck and Cross (1952) reported an adult bobwhite quail in the stomach of a one and one-half pound channel catfish from Canton Reservoir, Oklahoma. The present report is concerned with the utilization of cotton rats, *Sigmodon hispidus* Say and Ord, as food of the channel catfish.

On September 23, 1958 a channel catfish approximately six pounds in weight with a regurgitated cotton rat in its mouth was taken from a gill net set in Lake Carl Blackwell, Payne County, Oklahoma. This fish was removed from the net and released. Following this incident the next 20 channel catfish caught in gill nets in Lake Carl Blackwell from October 3 to November 29 were examined for the occurrence of cotton rats as food items. These fish ranged in size from three to eight pounds and were caught during commercial fish operations. Macroscopic stomach examination was made on 19 of these fish. One additional fish caught on October 17, with a regurgitated rat, was released alive. On two separate occasions the remains of cotton rats were taken from net webbing where apparently some fish had become entangled and regurgitated a rat before escaping from the net.

Of the 19 stomachs examined, five contained the remains of one or more cotton rats. Of these five stomachs, one contained three large, intact cotton rats, two the remains of two rats each and two one rat each. Includ-

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ing the fish taken from nets with regurgitated rats, a total of seven channel catfish of 21 individuals examined were known to have eaten *Sigmodon*. With the exception of one frog and the unidentified remains of two or three small fishes, the stomachs examined, which did not contain rat remains, were empty. No stomachs with rodents contained other food items.

While 33 percent of 21 channel catfish taken from Lake Carl Blackwell from September 23 to November 29 contained at least one cotton rat, approximately three hundred flathead catfish, *Pylodictis olivaris* (Rafinesque), caught from the same lake during this period were cleaned by the management personnel of the lake and reportedly contained no cotton rats.

The following additional incidents of channel catfish eating cotton rats were brought to the writers attention. Messrs. R. E. Elkins and S. W. Jackson, Jr. reported taking a five-pound channel catfish and a regurgitated cotton rat from the same tangle of a gill net set in Yahola Reservoir, Tulsa County, on September 9, 1958. The same observers reported an intact cotton rat from the stomach of a six-pound channel catfish taken from the same reservoir on September 26. Mr. Leland Roberts, a graduate student at Oklahoma State University, reported recovering a channel catfish, containing rodent hair, from a farm pond north of Stillwater. The pond had been poisoned with rotenone.

The utilization of cotton rats as food by channel catfish is not surprising, considering the present rodent populations. Throughout most of Oklahoma during the summer and fall of 1958 small mammals, particularly small rodents, developed huge populations. Where marginal vegetation around ponds and lakes provide sufficient habitat for these animals, occasional individuals may accidentally fall into the water or voluntarily swim short distances across small arms or narrow inlets. Other rodents may be washed into ponds and lakes during rainy seasons. It is not known whether the channel catfish were feeding on live rats swimming on the surface or drowned rats on the bottom.

One brief sport-fishing effort in a small cove of Lake Carl Blackwell utilizing live cotton rats for bait was unsuccessful.

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