

behavior is a "vacuum activity," related to confinement. However, food was always available *ad libitum*, and the behavior was always associated with the constructive activity of tunnel building. The third explanation, tool-use, is another possible interpretation, since the activity did fulfill a constructive role, i.e., that of moving soil. The observed behavior also suggests tool-use because a specific object was handled and subsequently retrieved from the mound of castings, to be used again for the same apparently constructive activity.

Thus, I consider tool-use to be the most likely explanation of the observed behavior. As a tool the object may act as an extension of the animals' limbs. For example, as a scraper it could possibly increase the scraping surface of the claws. As a scoop it could increase and consolidate the surface area of the forepaws and face as the soil is pushed out of the tunnel. It would be of value to subject these observed behaviors and predictions to a more conclusive experimental situation.

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INLAND RECORDS OF *FUNDULUS GRANDIS* (CYPRINODONTIDAE) IN TEXAS.—*Fundulus grandis* is generally considered a coastal species (Hubbs, Texas Parks and Wildl. Tech. Ser. No. 11, 1976; Eddy, *How to Know the Freshwater Fishes*, Wm. C. Brown Co., 1978). The closely related *F. heteroclitus*, a species which is also typically estuarine, has recently been reported as established in an inland river in Pennsylvania (Denoncourt et al. *Estuaries* 1:269–272, 1978). We report herein the presence of breeding populations of *F. grandis* in three inland rivers in Texas, and a record of a single specimen from a reservoir in western Texas.

Between 4 Nov. and 23 Nov. 1978, 92 specimens of *F. grandis* (Strecker Mus., Baylor Univ., SM 4082–SM 4173) were collected from four localities in the Brazos River between Lake Whitney Dam (Hill and Bosque counties) and Lake Brazos (McLennan Co.), which are over 400 km upriver from the Gulf of Mexico. Two distinct size classes of *F. grandis* were collected at three of these localities, and three size classes occurred at the fourth (just below Lake Whitney Dam). Specimens were taken primarily from clear, shallow riffles, but at one locality they were most abundant in quiet, shallow pools along the shore where *F. grandis* was the only species collected. Seining in the Brazos River at localities immediately below and 58 km below Lake Brazos, and at a locality immediately above Lake Whitney during November 1978 revealed no other specimens of *F. grandis*.

On 26 and 27 May 1979, 17 specimens of *F. grandis* (Texas Nat. Hist. Coll., Univ. Texas at Austin, TNHC 9626, TNHC 9650, TNHC 9667) were collected at three localities along the Pecos River, Val Verde Co. (1 km upriver from Fox Canyon, Scott Spring at the mouth of Hog Canyon, and 2 km upriver from Ford Canyon). These specimens consist of three size classes and include several gravid females. On 24 and 25 Jun. 1979, further specimens of *F. grandis* (SM 4203) were collected at Pandale Crossing, Val Verde Co., 11 km up the Pecos River from the Fox Canyon collection. Other collections above Pandale Crossing and below Ford Canyon did not produce this species.

Examination of other collections at Strecker Museum revealed 28 specimens of *F. grandis* (SM 4174–SM 4201) collected by F. R. Gehlbach on 4 Nov. 1970 from beaver ponds below Falcon Reservoir Dam, Starr Co., Texas. This locality is on the

Rio Grande approximately 180 km inland from Brownsville, Cameron Co., the nearest locality for *F. grandis* in the collections of the Texas Natural History Collection. A survey of the fishes of the lower Rio Grande in 1959 (Treviño-Robinson, Copeia 1959:253–256, 1959) did not list *F. grandis*.

One specimen of *F. grandis* (SM 4202) was collected in Lake Balmorhea, Reeves Co., by A. A. Echelle and A. F. Echelle on 30 Jul. 1977. This specimen was collected along with large numbers of *Cyprinodon variegatus* (A. A. Echelle, pers. commun.), another estuarine species. The specimen is an adult male (75 mm SL) in breeding condition.

*Fundulus grandis* is commonly used as a bait fish in Texas (Hoese and Moore, *Fishes of the Gulf of Mexico. Texas, Louisiana, and Adjacent Water*, Texas A&M Univ. Press, 1978), and the populations of *F. grandis* in the Brazos River between Lake Whitney and Lake Brazos probably resulted from bait releases or escapes. Lake Whitney Dam is a popular sport-fishing area, and since *F. grandis* seems to be one of the dominant fishes in the area in terms of numbers, it is likely that the dam area was the original site of introduction. Populations of *F. grandis* immediately above Lake Brazos are small, indicating recent establishment of this species in that area. It is possible that Lake Brazos does not represent a barrier to *F. grandis*, and that Brazos River populations are still expanding. Pandale Crossing is also a sport-fishing area, and populations are established along the Pecos River for at least 50 km below this point; again bait release may have been the means of establishment. The Starr Co. population of *F. grandis* may be native since several other species of estuarine fishes occur naturally above Falcon Dam (Hubbs, *Southwest. Nat.* 2:84–104, 1957). The single specimen of *F. grandis* from Lake Balmorhea was undoubtedly introduced along with the *Cyprinodon variegatus* which are common there.

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NOTES ON THE DIET OF A FERAL POPULATION OF *XENOPUS LAEVIS* (PIPIDAE) IN CALIFORNIA.—*Xenopus laevis* was first reported as an exotic in southern California in 1968 (St. Amant, Hoover, and Stewart, *California Fish Game* 59:151–153, 1973). That article and an earlier one (Mahrđt and Knefler, *Environ. Southwest* 446:2–5, 1972) generated considerable interest in the potential impact of an exotic frog on the established fauna. A number of articles subsequently appeared dealing with the impact and status of the California populations (Mahrđt and Knefler, *Environ. Southwest* 450:1–3, 1973; Branson, *Natl. Parks Conserv. Mag.* June:17–18, 1975; Branning, *Natl. Wildl.* 17:34–37, 1979). While these articles touched on life history aspects of feral California populations, the common thread linking them is concern for their feeding habits and a characterization of the frog as a voracious, nonspecific predator capable of exerting serious pressure on the existing fauna. These conclusions appear to be based on information in the literature, aquarium observations, and on *a priori* field observations. In only two studies, both unpublished (Lenaker, unpub. rep. California State Poly. Univ., 12 pp., 1972; Zacuto, unpub. rep. California Dept. Fish Game, 36 pp., 1975) were any efforts made to analyze stomach contents and to use the data to supply baseline information con-