

TABLE 1—Continued

Measurements of *Ocythoe tuberculata* taken at Santa Catalina Island

Mouth to tip of hectocotylus arm	51 mm
Mouth to tip of left third arm	21 mm
Mouth to tip of right ventral arm	54 mm
Mouth to tip of left ventral arm	51 mm
Mantle length (ventral)	15.5 mm
Mantle breadth	13.5 mm
Diameter of largest sucker of first left arm	1.8 mm
Diameter of largest sucker of second left arm	1.5 mm
Diameter of largest sucker of third left arm	1.2 mm
Diameter of largest sucker of fourth left arm	1.8 mm
Diameter of largest sucker of hectocotylus	2.1 mm

I found only one publication that reported octopods in salps. Jatta (1896) recorded the occurrence of a male *Ocythoe tuberculata* in *Salpa tilesii* and noted that Schmittlein had in 1880 (no reference given) recorded finding a male *Argonauta argo* in a salp.

REFERENCES

- Berry, S. Stillman. 1910. A review of the cephalopods of western North America. Bull. U.S. Bur. Fish., 30 : 267-336.
- . 1955. On recent Californian occurrences of the rare octopod *Ocythoe*. Calif. Fish and Game, 41 (2) : 177-181.
- Jatta, Giuseppe. 1896. Fauna and flora des Golfes von Neapel und der Angrenzenden Meeres-Abschnitte. Herausgegeben von der Zoologischen Station Zu Neapel. 23. Monographie: I Cefalopodi, 268 + 31 p.
- Lane, Frank W. 1960. Kingdom of the octopus. Sheridan House, New York. 300 p.
- James E. Hardwick, *Marine Resources Region, California Department of Fish and Game. Accepted June 1969.*

ESTABLISHMENT OF *TILAPIA MOSSAMBICA* PETERS IN BARD VALLEY, IMPERIAL COUNTY, CALIFORNIA

On July 2, 1968, Franklin Hoover and Marschall Stevens, California Department of Fish and Game, verified the presence of tilapia in two irrigation drains, the Araz Drain and the Reservation Main Drain, near Bard, Imperial County. The only other known free-living tilapia in California exist in a small ditch near the Hot Mineral Spa, Imperial County, approximately 75 miles northwest of Bard (St. Amant, 1966).

Melvin Sheldon, Imperial Irrigation District, first informed us of the presence of tilapia in Bard Valley on June 28, 1968. Ethelwynn Trewavas, British Museum (Natural History) Zoological Department, provided positive identification of the tilapia as *T. mossambica*. Carl L. Hubbs, Scripps Institution of Oceanography, gave valuable assistance in the identification.

Tilapia were collected from the Araz Drain in July 1968, and from the Reservation Main Drain in July 1968 and February, May, and June 1969.

Tilapia are known to exist, from these collections, in approximately 15 miles of these drains.

Water temperatures in most areas of these ditches seldom drop below 60 F (Melvin Sheldon, pers. comm.). This temperature is within the lower temperature limits of *T. mossambica* (Kelly, 1957).

The Arizona Game and Fish Department introduced *T. mossambica* in several drains near Yuma. "The Tilapia that were stocked in the Yuma canal system are *T. mossambica* and have been self-supporting in that area for some six years." (Al Essbach, pers. comm., 1968.) We believe the tilapia now found in the Bard Valley originated from the tilapia introduced near Yuma, and are the result of natural migration or unauthorized introductions.

Due to the popularity of tilapia as a sport fish, we anticipate its further dispersal in southern California as a result of unauthorized introductions by anglers.

REFERENCES

- Kelly, H. D. 1957. Preliminary studies on *Tilapia mossambica* Peters relative to experimental pond culture. Proc. Ann. Conf. Southeastern Assoc. Game and Fish Comm., 10 : 139-149.
- St. Amant, James A. 1966. Addition of *Tilapia mossambica* (Peters) to the fauna. Calif. Fish and Game. 52 (1) : 54-55.
- Franklin G. Hoover and James A. St. Amant, *Inland Fisheries, Region 5, California Department of Fish and Game. Accepted August 1969.*

SCRUB JAY POSSIBLY FEEDING ON ECTOPARASITES OF A BLACK-TAILED DEER

A scrub jay (*Aphelocoma coerulescens*) possibly feeding on ectoparasites of a Columbian black-tailed deer (*Odocoileus hemionus columbianus*) was observed on August 31, 1965, about 2 miles northeast of Alpine Lake, Marin County, California. Through 7 x 35 binoculars, we saw the jay land on the back of the foraging deer. As we moved to within approximately 60 yards of the deer, a three-point buck, it looked directly towards us and stood motionless. The jay quickly flew to the antlers and perched there a few moments. It then hopped onto the head and, pecking at the skin every few seconds, moved from the head down the back of the deer's neck. After remaining on the deer 2 or 3 minutes, the jay flew a short distance away and disappeared into the brush. The deer appeared undisturbed by the bird's activity; it remained motionless, watching us, for at least 5 min.

We believe that the jay was feeding on ectoparasites (ticks or deer keds or both), although we could not see them. Dixon (1944) reported seeing a "California Jay" (scrub jay) presumably picking ticks and deer keds from a mule deer in Sequoia National Forest on March 22, 1944. Local residents told him that this was a common sight.

REFERENCE

- Dixon, J. S. 1944. California jay picks ticks from mule deer. Condor, 46 : 204.
- Terry A. Schulz and Paul D. Budwiser, G. W. Hooper Foundation, University Of California Medical Center, San Francisco. Accepted August, 1969.