

# TECHNICAL NOTE

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USDA NATURAL RESOURCES CONSERVATION SERVICE PACIFIC ISLANDS AREA

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## Biology Technical Note No. 8

### NATIVE STREAM ANIMALS OF HAWAII

This coversheet transmits a copy of a field card which shows native fish and shellfish which was developed by the State of Hawaii, Department of Land and Natural Resources, Division of Aquatic Resources in 1993.

The maps may be used to complete Biology Technical Note No. 2 Native Aquatic Wildlife Inventory Worksheet or as a reference for other inventories and assessments.



*Native Stream Animals of Hawaii*



**'O'opu hi'ukole (alamo'o)**  
*Lentipes concolor*

Juveniles and females uniform olive to brown coloration; males have black heads and orange tails. Length to 5 inches. Usually middle to upper stream reaches. Feeds on plant and animal matter. Endemic.



**'O'opu nopili**  
*Sicyopterus stimpsoni*

Variable coloration; juveniles and females mottled brown or gray; males often striped, and have pronounced first dorsal fin. Length to 7 inches. Usually middle stream reaches; prefers fast flowing water. Feeds on algae growing on rocks. Endemic.



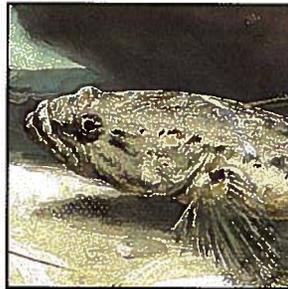
**'O'opu nakea**  
*Awaous guamensis*

Mottled brown and black, white belly; vertical stripes on dorsal and caudal fins; dark patch on caudal peduncle. Length to 14 inches. Usually lower to middle stream reaches. Feeds on algae, worms, snails and other bottom dwelling aquatic organisms. Indigenous.



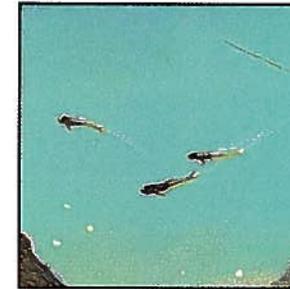
**'O'opu naniha**  
*Stenogobius hawaiiensis*

Yellow-brown coloration; may have 12 vertical black bands. Diagonal black band through eyes. Length to 5 inches. Usually estuaries and lower stream reaches; prefers soft-bottom areas. Feeds on plant and animal matter. Endemic.



**'O'opu akupa (okuhe)**  
*Eleotris sandwicensis*

Dark brown or black coloration. Only 'o'opu with separate pelvic fins. Length to 12 inches. Usually estuaries and lower stream reaches. Feeds on invertebrates and small fishes. Endemic.



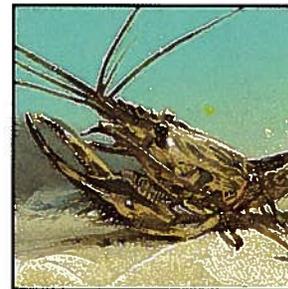
**Hinana**

All species of 'o'opu begin their lives in streams. Newly hatched larvae are swept out to sea, where they become part of oceanic plankton. After several months, post-larval 'o'opu, now called *hinana*, return in large numbers to streams, and migrate to preferred habitat.



**'Opae kala'ole (kuahiwi)**  
*Atyoida bisulcata*

Golden-brown, dark green to black coloration. Length to 2 inches. Usually upper stream reaches; prefers fast-flowing water. Feeds on plant and animal matter. Endemic.



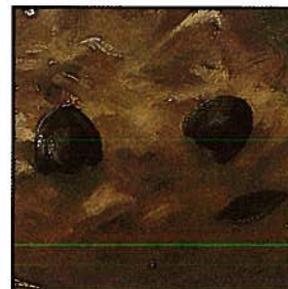
**'Opae 'oeha'a**  
*Macrobrachium grandmanus*

Brownish coloration; males with one large and one small claw, which are vertically striped. Length to 3 inches. Usually estuaries and lower stream reaches. Feeds on plant and animal matter. Endemic.



**Hihiwai**  
*Neritina granosa*

Shell black with faint rings; knobby projections present in varying degrees; rough to fairly smooth. Underside of shell orange. Up to 2 inches in diameter. Lower, middle and upper stream reaches. Feeds on algae growing on rocks. Endemic.



**Hapawai**  
*Neritina vespertina*

Smooth thin shell, pale brown color; shell more flattened than hihiwai, usually with wing-like projections. White calcium deposits often on shell apex. Up to 1 inch in diameter. Usually estuaries and lower stream reaches. Feeds on algae growing on rocks. Endemic.

