

*Polydactylus nigripinnis* Munro, 1964

Fig. 106; Plate IIIg

*Polydactylus nigripinnis* Munro, 1964: 156, fig. 4 [type locality: 4 km off east head of Purari River, Gulf of Papua, Papua New Guinea; holotype (CSIRO A. 1828, 103 mm standard length); 3 paratypes (CSIRO A. 1827, 96 mm standard length; CSIRO A. 1829, 108 mm standard length; CSIRO A. 1830, 100 mm standard length)].

**Synonyms:** None.

**FAO Names:** **En** - Blackfin threadfin; **Fr** - Barbure à nageoires noires; **Sp** - Barbudo de aletas negras.

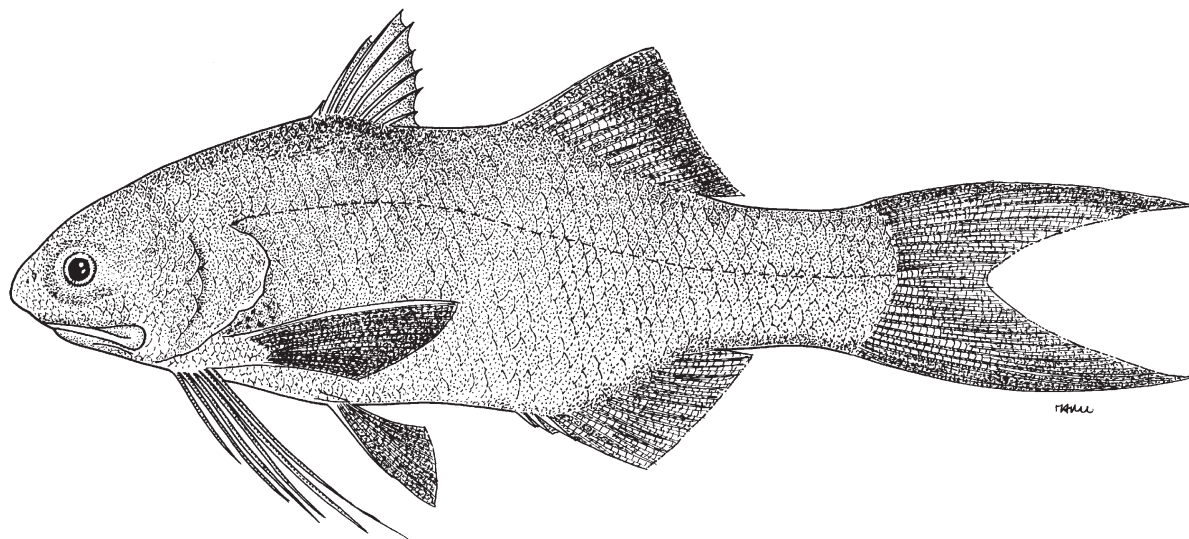


Fig. 106 *Polydactylus nigripinnis*

**Diagnostic Features:** A small-sized species. Body depth at first dorsal-fin origin 30 to 36% (mean 33%) of standard length; head length 32 to 36% (mean 33%) of standard length. Snout pointed; occipital profile nearly straight. Posterior margin of maxilla extending slightly beyond level of posterior margin of adipose eyelid; upper-jaw length 14 to 16% (mean 15%) of standard length; depth of posterior margin of maxilla less than eye diameter; lip on lower jaw well developed, dentary teeth restricted to dorsal surface; teeth villiform in broad bands on palatines and ectopterygoids; vomerine tooth plate covered with skin and teeth absent. Posterior margin of preopercle serrated. First dorsal fin with VIII spines, all spine bases of similar thickness; second dorsal fin with I spine and 12 or 13 (mode 13) soft rays; anal fin with III spines and 11 to 13 (mode 12) soft rays, anal-fin base slightly greater than second dorsal-fin base; pectoral fin with 16 to 18 (mode 17) rays (all rays unbranched), its length 29 to 34% (mean 31%) of standard length, posterior tip extending well beyond level of posterior tip of pelvic fin; pectoral filaments 6; first (shortest) and second pectoral filaments not reaching to level of pelvic-fin origin; third to fifth pectoral filaments extending beyond level of pelvic-fin origin; sixth pectoral filament longest, its length 26 to 35% (mean 32%) of standard length, just short of level of posterior tip of pectoral fin; caudal fin deeply forked, upper and lower caudal-fin lobes not filamentous, upper caudal-fin lobe 36 to 45% (mean 42%) and lower lobe 36 to 40% (mean 39%) of standard length. Pored lateral-line scales 46 to 50 (mode 47); lateral line simple, extending from upper end of gill opening to upper end of lower caudal-fin lobe; scale rows above lateral line 7, below 11 to 13 (mode 11). Gillrakers 10 to 13 (mode 11) on upper limb, 14 to 16 (mode 15) on lower limb, 24 to 29 (mode 27) total. Vertebrae 10 precaudal and 14 caudal; supraneural bones 3. Swimbladder absent. **Colour:** Upper sides of head and trunk with slightly darkish silver tinge, becoming lighter on lower sides; snout semi-translucent; first and second dorsal fins yellowish white; anterior margin of pelvic fin yellowish, other parts white; anal fin white; pectoral fin dense black; pectoral filaments white; caudal fin darkish silver.

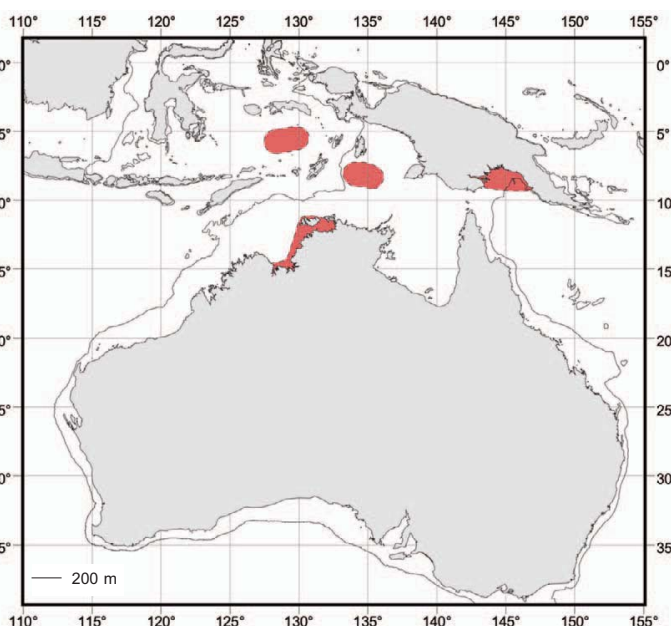


Fig. 107 *Polydactylus nigripinnis*  
■ Known distribution

**Geographical Distribution:** Currently known only from Papua New Guinea (Gulf of Papua), Australia (Cambridge Gulf, Western Australia to Van Diemen Gulf, Northern Territory) and the Arafura Sea (Fig. 107).

**Habitat and Biology:** Taken off river mouths in Australia and Papua New Guinea, and is also caught offshore in the Arafura Sea. No other data are available.

**Size:** Maximum standard length at least 15 cm (Feltes *in* Carpenter and Niem, 2001).

**Interest to Fisheries:** None.

**Local Names:** AUSTRALIA: Black-finned threadfin; PAPUA NEW GUINEA: Black-finned threadfin.

**Literature:** Feltes *in* Carpenter and Niem (2001); Motomura (2002).

**Remarks:** *P. nigripinnis* and 5 other species: *P. malagasyensis*, *P. microstomus*, *P. mullani*, *P. persicus* and *P. sextarius*, are all characterized by having the vomer covered with skin and without teeth. *Polydactylus nigripinnis* is easily distinguished from the others by lacking a large black spot anteriorly on the lateral line (present in the other 5 species) and having unbranched pectoral-fin rays (branched, except uppermost 1 or 2 in the other 5 species).

In the Indo-Pacific, only 3 species, *P. longipes*, *P. nigripinnis* and *P. sexfilis*, have 6 pectoral filaments and no black spot anteriorly on the lateral line. *Polydactylus nigripinnis* differs from *P. sexfilis* in having a vomer without teeth (present in the latter), lower counts of pored lateral-line scales [46 to 50 (mode 47) versus 61 to 67 (mode 64) in *P. sexfilis*], swimbladder absent (present in *P. sexfilis*) and smaller orbit diameter [5 to 7% (mean 6%) of standard length versus 8 to 11% (mean 9%) of standard length in *P. sexfilis*]. Comparisons of *P. nigripinnis* with *P. longipes* are given in the account of the latter.

*Polydactylus octonemus* (Girard, 1858)

Fig. 108; Plate IIIh

*Polynemus octonemus* Girard, 1858: 167 [type locality: Brazos Santiago and Galveston, Texas, USA; 3 syntypes presently known (ANSP 22900, 62 mm standard length; USNM 739, 2 specimens, 62 to 79 mm standard length)].

**Synonym:** *Trichidion octofilis* Gill, 1861: 280 [type locality: New York, USA; holotype (USNM 15074, 166 mm standard length)].

**FAO Names:** En - Atlantic threadfin; Fr - Barbure huit doigts atlantique; Sp - Barbudo ocho dedos atlántico.

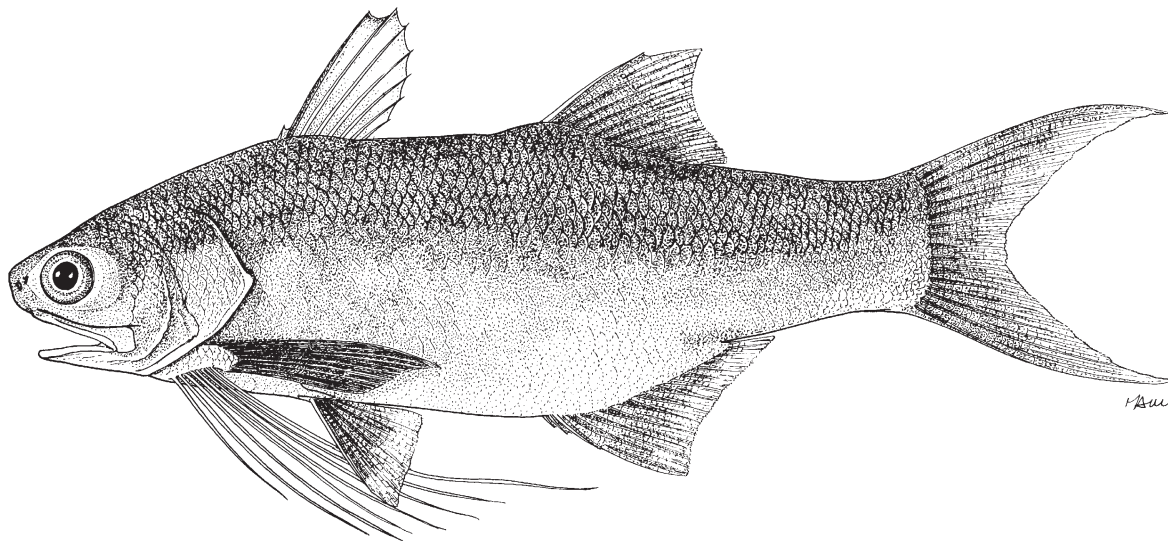


Fig. 108 *Polydactylus octonemus*

**Diagnostic Features:** A medium-sized species. Body depth at first dorsal-fin origin 28 to 32% (mean 29%) of standard length; head length 27 to 33% (mean 31%) of standard length. Snout pointed; occipital profile nearly straight. Posterior margin of maxilla just reaching to or extending slightly beyond level of posterior margin of adipose eyelid; upper-jaw length 12 to 15% (mean 14%) of standard length; depth of posterior margin of maxilla less than eye diameter; lip on lower jaw well developed, dentary teeth restricted to dorsal surface; teeth villiform in broad bands on vomer, palatines and ectopterygoids. Posterior margin of preopercle serrated. First dorsal fin with VIII spines, all spine bases of similar thickness; second dorsal fin with I spine and 11 to 13 (mode 12) soft rays; anal fin with III spines and 12 to 14 (mode 13) soft rays, anal-fin base greater than second dorsal-fin base; pectoral fin with 14 to 16 (mode 15) rays (all rays unbranched), its length 24 to 29% (mean 27%) of standard length, posterior tip not reaching to level of posterior tip of pelvic fin (or just reaching in young specimens less than about 90 mm standard length); pectoral filaments 8 (rarely 9); first pectoral filament shortest, extending beyond level of

pelvic-fin origin; second to fifth pectoral filaments extending beyond level of pelvic-fin origin in adults (in young specimens less than about 90 mm standard length, third pectoral filament extending beyond level of posterior tip of pelvic fin, fourth pectoral filament reaching to level of anal-fin origin; fifth pectoral filament extending beyond level of anal-fin origin); sixth pectoral filament reaching to or extending slightly beyond level of posterior tip of pelvic fin in adults (extending beyond level of anal-fin origin in young); seventh pectoral filament not reaching to or extending beyond level of anal-fin origin; eighth pectoral filament longest, its length 39 to 51% (mean 43%) of standard length, not reaching to or extending beyond level of anal-fin origin in adults (reaching to level of midpoint of anal-fin base in young); caudal fin deeply forked, upper and lower caudal-fin lobes not filamentous, upper caudal-fin lobe 39 to 42% (mean 40%) and lower lobe 33 to 40% (mean 37%) of standard length. Pored lateral-line scales 56 to 64 (mode 59); lateral line bifurcated on caudal fin, extending to posterior margins of upper and lower caudal-fin lobes; scale rows above lateral line 6 or 7 (mode 6), below 10 to 12 (mode 11). Gillrakers 34 to 38 (mode 36). Vertebrae 10 precaudal and 14 caudal; supraneural bones 3. Swimbladder present, well developed. **Colour:** Upper sides of head and trunk with slightly darkish silver tinge, becoming lighter on lower sides; snout semi-translucent; first and second dorsal fins dusky yellow; pectoral fin black; pectoral filaments translucent; posterior margin of anal fin white, other parts dusky yellow; posterior margin of caudal fin blackish, other part dusky yellow.

**Geographical Distribution:** In the western Atlantic Ocean ranging from New York, USA to the west coast of Yucatán (Fig. 109).

**Habitat and Biology:** Generally occurs on sandy or muddy bottoms and on beaches, frequently in the surf. The species is taken at depths from 5 to 66 m in the Gulf of Mexico (Springer and Bullis, 1956; Dentzau and Chittenden, 1990), but is most abundant at depths of 5 to 16 m (Dentzau and Chittenden, 1990). In the Gulf of Mexico, young specimens (less than about 66 mm) have been taken at the surface over water depths from 1 035 to 2 736 m.

Dentzau and Chittenden (1990) studied the biology of *P. octonemus* in detail. It generally matures between 165 and 210 mm total length (approaching 7 to 9 months of age) and probably spawns in the Gulf of Mexico, off Louisiana and Texas. Spawning primarily occurs from mid-December to mid-March, spanning 45 to 120 days overall. Larvae (2- to 4-month-olds) are recruited in waters less than 16 m, and then begin to disperse to deeper waters in early summer. The species ranges from 135 to 165 mm total length at 6 months, from 165 to 215 mm at 9 months and from 180 to 205 mm at 1 year. The typical maximum life span is about 1 year but may exceed that if individuals survive a pelagic stage after spawning.

**Size:** Maximum total length 23 cm, commonly to 20 cm (Dentzau and Chittenden, 1990).

**Interest to Fisheries:** Caught incidentally by seines and trawls and is of little commercial importance.

**Local Names:** None known.

**Literature:** Feltes *in* Carpenter (2003).

**Remarks:** Examination by the author of the holotype of *Trichidion octofilis* showed it to be conspecific with *Polydactylus octonemus*, the former thereby being a junior synonym of the latter.

*Polydactylus octonemus*, *P. oligodon* and *P. virginicus*, all occurring in the western Atlantic, are very similar to each other in overall body appearance. *Polydactylus octonemus* differs from the other 2 species in having higher counts of pectoral filaments [8 (rarely 9) versus 7 (rarely 8) in the other 2 species] and gillrakers [34 to 38 versus 22 to 30 in the other 2 species].

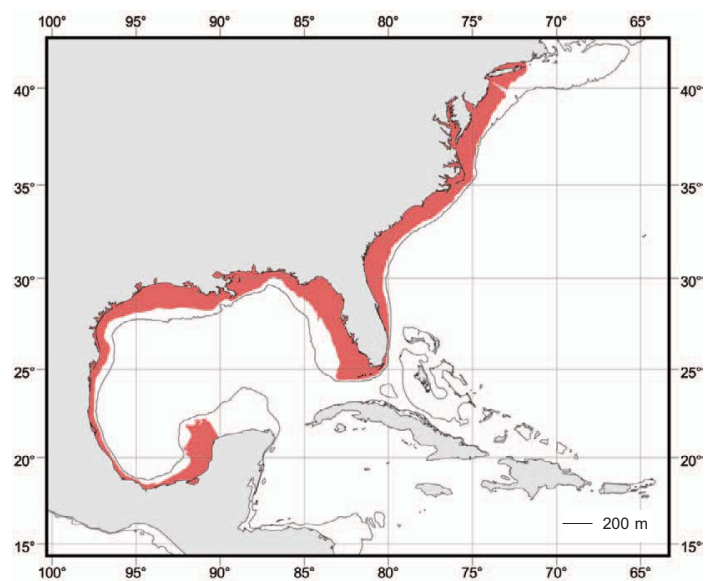


Fig. 109 *Polydactylus octonemus*  
■ Known distribution

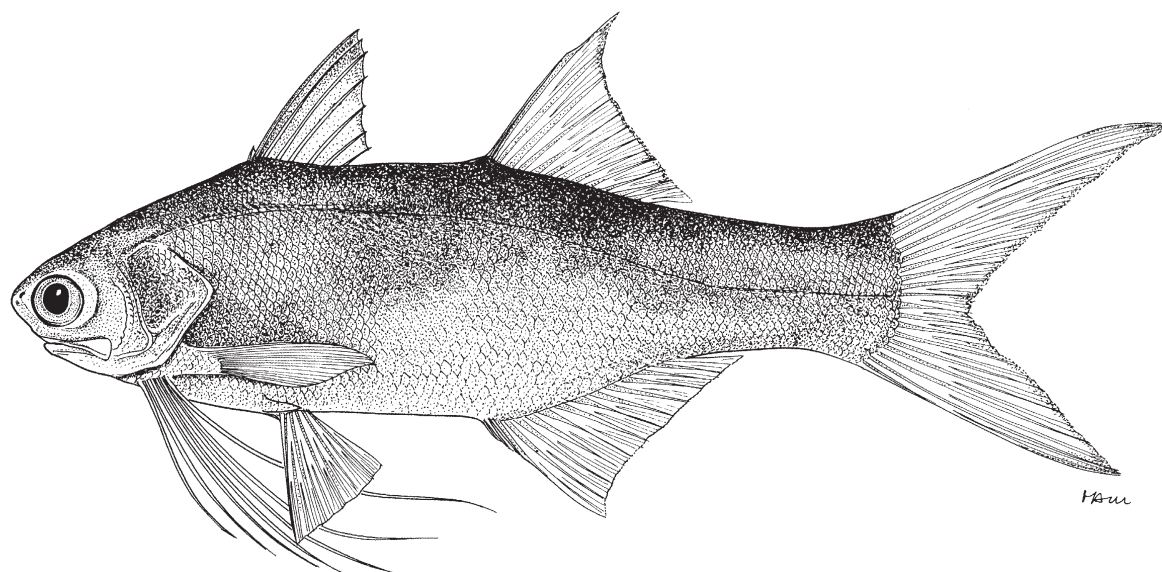
*Polydactylus oligodon* (Günther, 1860)

Fig. 110; Plate IVa

*Polynemus oligodon* Günther, 1860: 322 [original locality: Rio de Janeiro, Brazil and Jamaica, based on 2 syntypes; type locality: Rio de Janeiro, Brazil, based on a lectotype (BMNH 1853.4.18.23, 147 mm standard length) designated by Randall, 1966; paralectotype (BMNH 1848.1.12.890, stuffed specimen, 146 mm standard length)].

**Synonyms:** None.

**FAO Names:** **En** - Littlescale threadfin; **Fr** - Barbure à petites écailles; **Sp** - Barbudo de escamas pequeñas.



**Fig. 110** *Polydactylus oligodon*

**Diagnostic Features:** A medium-sized species. Body depth at first dorsal-fin origin 27 to 30% (mean 28%) of standard length; head length 30 to 33% (mean 32%) of standard length. Snout pointed; occipital profile nearly straight. Posterior margin of maxilla just short of or reaching to level of posterior margin of adipose eyelid; upper-jaw length 13 to 15% (mean 14%) of standard length; depth of posterior margin of maxilla less than eye diameter; lip on lower jaw well developed, dentary teeth restricted to dorsal surface; teeth villiform in broad bands on vomer, palatines and ectopterygoids. Posterior margin of preopercle serrated. First dorsal fin with VIII spines, all spine bases of similar thickness; second dorsal fin with I spine and 11 or 12 (mode 12) soft rays; anal fin with III spines and 13 to 15 (mode 14) soft rays, anal-fin base greater than second dorsal-fin base; pectoral fin with 15 or 16 (mode 16) rays (all rays unbranched), its length 22 to 24% (mean 23%) of standard length, posterior tip not reaching to level of posterior tip of pelvic fin; pectoral filaments 7 (rarely 8); first pectoral filament shortest, extending slightly beyond level of pelvic-fin origin; second and third pectoral filaments extending beyond level of pelvic-fin origin; fourth pectoral filament reaching to level of posterior tip of pelvic fin; fifth pectoral filament reaching to or extending beyond level of posterior tip of pelvic fin; sixth pectoral filament reaching to or extending slightly beyond level of anal-fin origin; seventh pectoral filament longest, its length 31 to 41% (mean 38%) of standard length, extending beyond level of anal-fin origin; caudal fin deeply forked, upper and lower caudal-fin lobes not filamentous, upper caudal-fin lobe 40 to 43% (mean 42%) and lower lobe 37 to 41% (mean 39%) of standard length. Pored lateral-line scales 67 to 73 (mode 70); lateral line bifurcated on caudal fin, extending to posterior margins of upper and lower caudal-fin lobes; scale rows above lateral line 7 to 9 (mode 9), below 11 to 14 (mode 13). Gillrakers 22 to 30 (mode 27). Vertebrae 10 precaudal and 14 caudal; supraneural bones 3. Swimbladder present.

**Colour:** Upper sides of head and trunk with slightly darkish silver tinge, becoming lighter on lower sides; snout semi-translucent; first and second dorsal fins translucent; pectoral fin white with a small number of melanophores; pectoral filaments and pelvic fin white; base and posterior margin of anal fin white, other parts translucent; posterior margin of caudal fin blackish, other part whitish.

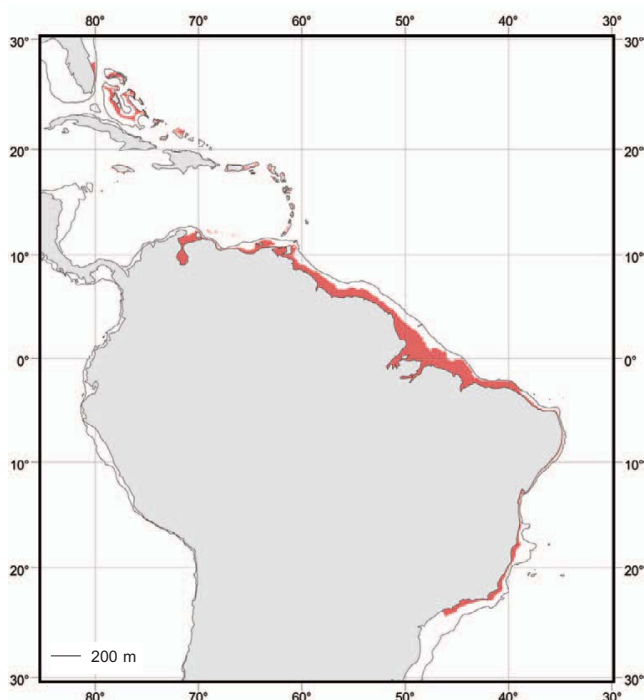
**Geographical Distribution:** In the western Atlantic Ocean ranging from the east coast of Florida (at least to Fort Lauderdale), USA to Santos, Brazil, including the Antilles, Venezuela, Guyana, Suriname and French Guiana (Fig. 111). However, the species does not occur in the Gulf of Mexico and western Caribbean Sea.

**Habitat and Biology:** Occurs close to the shore in surf along exposed sandy beaches. No other data are available.

**Size:** Maximum total length 46 cm (Feltes *in* Carpenter, 2003).

**Interest to Fisheries:** Caught incidentally by seines and trawls and is of little commercial importance.

**Local Names:** BAHAMAS: Smallscale threadfin; DOMINICA: Barbú.



**Fig. 111** *Polydactylus oligodon*  
■ Known distribution