

## Four new gobiid fishes of the genus *Bryaninops* from the East Indies

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### Abstract

Four new species of the gobiid fish genus *Bryaninops* are described: *B. annella* from 19 specimens collected from sea fans of the genus *Annella* from Bali, Indonesia and Lizard Island, Great Barrier Reef; *B. earlei* from nine specimens collected from a sea pen and adjacent seagrass in the D'Entrecasteaux Islands, Papua New Guinea; *B. tectus* from six specimens collected from the gorgonian *Ellisella quadrilineata* at Linnet Reef, Great Barrier Reef; and *B. translucens* from two specimens commensal on a sponge in the Mentawai Islands off SW Sumatra. *Bryaninops annella* is closely related to *B. amplus* Larson and *B. loki* Larson with which it shares a rounded, cup-like, pelvic-fin disc, the same dorsal and anal fin-ray counts, and slender head and body; it differs in having the gill opening extending forward slightly before the posterior margin of the preopercle, longitudinal scale series 34-45, and transverse scale rows 8-10. The three species differ also by a modal count of one in pectoral-ray counts (*annella* with 14, *loki* with 15, and *tectus* with 16). *Bryaninops earlei* differs from all congeners in having large ctenoid scales (22-25 in longitudinal series); it is similar to *B. natans* in lacking a canal connecting posterior interorbital pores, but clearly different in having scales extending anteriorly onto the nape. *Bryaninops tectus* is closely related to *B. nexus* Larson and *B. erythrops* (Jordan and Seale), with which it shares the absence of anterior and posterior nostrils. It differs from these two species in lacking ctenoid scales below the second dorsal fin, above the anal fin, and on the ventral side of the caudal peduncle. *Bryaninops translucens* is closely related to *B. dianneae* Larson and *B. spongicolus* Suzuki, Bogorodsky & Randall, with which it shares an oblong and very flat pelvic disc, instead of rounded and cup-like as in most other species of the genus. It differs also from these two species in having ctenoid scales on the nape and a wide, anteriorly- directed pocket on the pelvic frenum.

### Zusammenfassung

Beschrieben werden vier neue Grundelarten der Gattung *Bryaninops*: *B. annella* auf der Grundlage von 19 Exemplaren, die von Seefächern der Gattung *Annella* vor Bali,

Indonesien und Lizard Island, Großes Barriere-Riff, gesammelt wurden; *B. earlei* auf der Grundlage von neun Exemplaren, gesammelt von Seefedern und dem benachbarten Seegras an den D'Entrecasteaux-Inseln, Papua-Neuguinea; *B. tectus* anhand von sechs Exemplaren, gesammelt von Gorgonien der Art *Ellisella quadrilineata* auf dem Linnett-Riff, Großes Barriere-Riff; sowie *B. translucens* auf der Grundlage von zwei auf einem Schwamm zusammen lebenden Exemplaren, die an den Mentawai-Inseln südwestlich vor Sumatra gesammelt wurden. *Bryaninops annella* ist nahe verwandt mit *B. amplus* Larson und *B. loki* Larson – gemeinsame Merkmale sind die rundliche, schalen-artige Bauchflossenscheibe, dieselben Zahlen bei den Rücken- und Afterflossenstrahlen, schlanker Kopf und Rumpf; Unterscheidungsmerkmale der neuen Art: die Kiemenöffnung erstreckt sich nach vorne etwas über den Hinterrand des Präoperculums hinaus, 34-45 Längsschuppenreihen sowie 8-10 Querschuppenreihen. Drei Arten lassen sich außerdem nach der mittleren Zahl der Brustflossenstrahlen unterscheiden (14 bei *annella*, 15 bei *loki*, 16 bei *tectus*). *Bryaninops earlei* unterscheidet sich von allen anderen Angehörigen der Gattung durch die großen Kammschuppen (22-25 in Längsreihen); diese neue Art ist *B. natans* darin ähnlich, dass ein Kanal fehlt, der die hinteren Interorbitalporen verbindet, unterscheidet sich aber deutlich dadurch, dass die Schuppen sich nach vorne bis zum Nacken erstrecken. *Bryaninops tectus* ist nahe verwandt mit *B. nexus* Larson und *B. erythrops* (Jordan und Seale) – gemeinsames Merkmal ist das Fehlen der vorderen und hinteren Nasenlöcher. Unterscheidungsmerkmal der neuen Art im Vergleich zu den beiden anderen sind die fehlenden Kammschuppen unter der zweiten Rückenflosse, über der Afterflosse und an der ventralen Seite des Schwanzstiels. *Bryaninops translucens* ist nahe verwandt mit *B. dianneae* Larson und *B. spongicolus* Suzuki, Bogorodsky & Randall – gemeinsames Merkmal ist die längliche und sehr flache Bauchflossenscheibe (im Vergleich zu der rundlichen und schalenförmigen Scheibe bei den meisten anderen Arten der Gattung). Unterscheidungsmerkmal aber der neuen Art sind die Kammschuppen am Nacken sowie eine weite, nach vorne gerichtete Tasche auf dem Frenum der Bauchscheibe.

## Résumé

Quatre nouvelles espèces de Gobiidés, *Bryaninops*, sont décrits: *B. annella* sur base de 19 spécimens collectés par des fans du marin du genre *Annella* de Bali, d'Indonésie et de Lizard Island, Grande Barrière de Corail; *B. earlei* sur base de neuf spécimens collectés dans une réserve marine et dans des herbiers marins adjacents, aux îles D'Entrecasteaux, Papouasie-Nouvelle-Guinée; *B. tectus* sur base de six spécimens collectés sur la gorgone *Ellisella quadrilineata* à Linnet Reef, Grande Barrière de Corail; et *B. translucens* sur base de deux spécimens en commensalisme sur une éponge, dans les îles Mentawai, au large sud-ouest de Sumatra. *Bryaninops annella* est très proche de *B. amplus* Larson et *B. loki* Larson avec lequel il partage un disque pelvien arrondi comme une tasse, le même nombre de rayons de la dorsale et de l'anale et tête et corps sveltes; il diffère par l'ouverture de l'ouïe située plus en avant, un peu avant la marge postérieure du préopercule, des séries longitudinales d'écaillés de 34-45 et des rangées d'écaillés transversales de 8-10. Les trois espèces se distinguent aussi par le nombre modal d'une unité dans la quantité de rayons pectoraux (*annella* avec 14, *loki* avec 15 et *tectus* avec 16). *Bryaninops earlei* se distingue de tous ses congénères par de larges écaillés cténoïdes (22-25 en séries longitudinales); il s'assimile à *B. natans* par l'absence d'un canal reliant les pores interorbitaux postérieurs, mais s'en distingue clairement par la présence d'écaillés s'étendant antérieurement jusqu'au rostre. *Bryaninops tectus* est très voisin de *B. nexus* Larson et de *B. erythrops* (Jordan et Seale) avec lequel il partage l'absence de nostrils antérieurs et postérieurs. Il se distingue de ces deux espèces par l'absence d'écaillés cténoïdes sous la seconde dorsale, au-dessus de l'anale et du côté ventral du pédoncule caudal. *Bryaninops translucens* est très proche de *B. dianneae* Larson et de *B. spongicolus* Suzuki, Bogorodsky & Randall, avec lesquels il partage un disque pelvien oblong et très aplati, et non arrondi et en forme de tasse comme pour la majorité des espèces du genre. Il se distingue aussi de ces deux espèces par la présence d'écaillés cténoïdes sur le rostre et par une large poche, dirigée vers l'avant, sur le frein pelvien.

## Sommario

Quattro nuove specie di gobiidi del genere *Bryaninops* sono qui descritte. Esse sono: *B. annella*, descritta sulla base di 19 esemplari raccolti da gorgonie del genere *Annella* a Bali, Indonesia e a Lizard Island, Great Barrier Reef; *B. earlei*, sulla base di nove esemplari raccolti alle Isole D'Entrecasteaux, Papua Nuova Guinea, su pennatule e adiacenti praterie marine; *B. tectus*, su sei esemplari raccolti su gorgonia *Ellisella quadrilineata* a Cardillo Reef, Great Barrier Reef; *B. translucens*, su due esemplari, commensali su spugne presso le isole Mentawai al largo della costa sudoccidentale di Sumatra. *Bryaninops annella* è strettamente legata a *B. amplus* Larson e *B. loki* Larson con cui condivide un disco pelvico tondo e a tazza, lo stesso numero di raggi dorsali e anali e testa e corpo affusolati, ma se ne differenzia per avere l'apertura branchiale che si estende in avanti poco prima del margine posteriore del preopercolo, 34-45 scaglie in serie longitudinali, e 8-10 scaglie in serie trasversali. Le tre specie

differiscono anche per un valore modale di uno nel conteggio dei raggi pettorali (*annella* con 14, *loki* con 15 e *tectus* con 16). *Bryaninops earlei* si differenzia da tutti i congeneri per avere grandi scaglie cténoïdi (22-25 in serie longitudinali); è simile a *B. natans* per l'assenza di un canale di collegamento dei pori interorbitali posteriori, ma chiaramente diverso per avere scaglie che si estendono anteriormente sulla nuca. *Bryaninops tectus* è strettamente legato a *B. nexus* Larson e *B. erythrops* (Jordan e Seale), con cui condivide l'assenza di narici anteriori e posteriori. Si differenzia da queste due specie per l'assenza di scaglie cténoïdi sotto la seconda pinna dorsale, sopra la pinna anale e sul lato ventrale del peduncolo caudale. *Bryaninops translucens* è strettamente legato a *B. dianneae* Larson e *B. spongicolus* Suzuki, Bogorodsky e Randall, con cui condivide un disco pelvico oblungo e molto piatto, invece di arrotondato e a tazza, come nella maggior parte delle altre specie del genere. Si differenzia anche da queste due specie per le scaglie cténoïdi sulla nuca e per un'ampia tasca sul frenulo pelvico diretta anteriormente.

## INTRODUCTION

The Indo-Pacific goby genus *Bryaninops* was described by Smith (1959) for his new species *ridens* from Mozambique. Yoshino in Masuda et al. (1984: 284) reported *B. ridens* from the Yaeyama Islands, Japan living in close association with coral. Larson (1985) revised *Bryaninops*, synonymized *Tenacigobius* under *Bryaninops*, added *Chaenogobius erythrops* Jordan & Seale, 1906 from Samoa to the genus, and described six new species. Larson (1987) described *Bryaninops nexus* as new from the Great Barrier Reef and reported additional specimens of three other species. Herler & Hilgers (2005) published a valuable paper on the systematics and ecology of small reef species of gobies of the northern Red Sea, including three species of *Bryaninops*. Suzuki et al. (2012) described *Bryaninops discus* and *B. spongicolus* and added new records of *B. loki* and *B. tigris* for the Red Sea. We describe here four additional species of the genus *Bryaninops*, one from the Bali, Indonesia, one from the D'Entrecasteaux Islands of Papua New Guinea, one from Linnet Reef of the Great Barrier Reef, and one from the Mentawai Islands off Sumatra, all long overlooked due to initial misidentification.

## MATERIALS AND METHODS

Data for description of the holotype are given first, followed by data for paratypes when different from the holotype. Lengths of specimens are given as standard length (SL), measured from the median anterior point of the upper lip to the base of the caudal fin (posterior end of the hypural plate); body

depth is measured at the anus; head length is taken from the median anterior point of the upper lip to the upper attachment of the opercular membrane, and head depth and head width are maximum measurements; eye diameter is the greatest fleshy diameter, and interorbital width the least fleshy width; snout length is measured from the median anterior point of the upper lip to the nearest fleshy edge of the orbit; upper-jaw length from the same anterior point to the posterior end of the maxilla; caudal-peduncle depth is the least depth, and caudal-peduncle length is taken from the posterior end of the anal-fin base to the midpoint of the caudal-fin base; lengths of spines and rays are measured to their extreme bases; pectoral-fin length from the extreme base of the uppermost ray to the tip of the longest ray; pelvic-fin length from the base of the pelvic spine to the tip of the longest soft ray; caudal-fin length is the length of the longest ray. Morphometric data presented in Table I, II, IV and V are given as percentages of the standard length or head length.

Scales in longitudinal series are counted from the base of the caudal fin to the most anterior scale; transverse scale rows are counted from the origin of the anal fin obliquely dorsoposterior to the base of the second dorsal fin, ignoring a small half scale at each end.

The cephalic sensory system, fin-ray branching, and the number and distribution of scales were determined from preserved material stained with cyanine blue. The counts of gill rakers and teeth were facilitated by clearing and staining with alizarin red.

The terminology of the parts of the head, especially the sensory papillae, pores, and canals, follows Akihito in Masuda et al. (1984: 238, Fig. 36).

### *Bryaninops annella*, n. sp.

(Tables I, III; Figs 1-4)

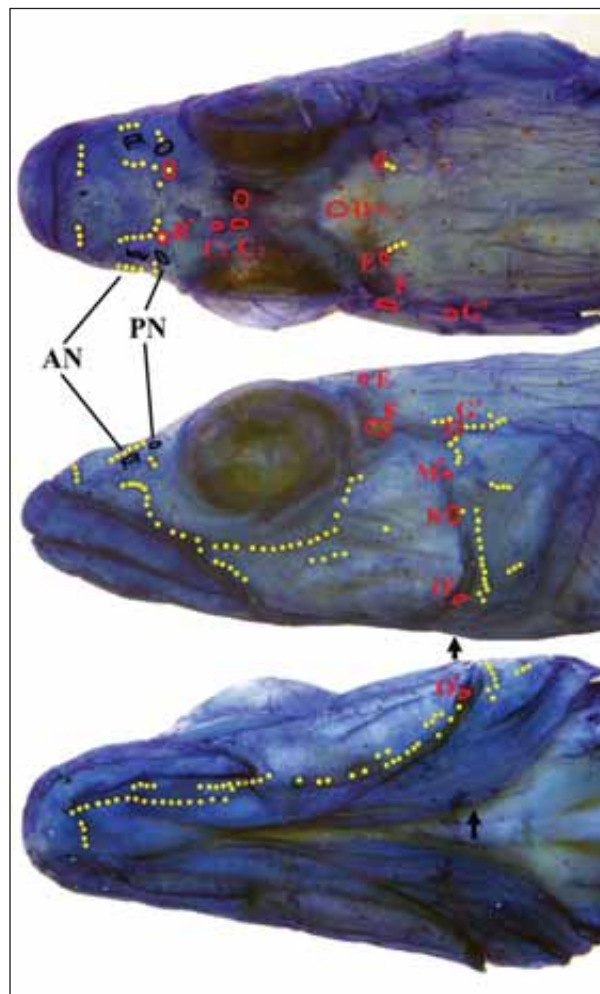
*Bryaninops loki* – Larson. 1985: 81 (in part, Great Barrier Reef).

**Holotype:** BPBM 41022, male, 26.6 mm SL, Indonesia, Bali, northwest coast at Tulamben, 1°28.8' S, 99°9.7' E, drop-off in 9 m, commensal on the sea fan *Annella mollis*, J. E. Randall, 12 October 2000.

**Paratypes:** AMS I. 24075-002, formerly registered as paratypes of *B. loki* (AMS I. 24075-001), 7 specimens (2 males, 19.4-20.2 mm SL & 5 females,

16.8-18.7 mm SL), Australia, Qld., Lizard Island, 14°42' S, 145°27' E, drop-off in 18 m, midway between South and Bird Islands, from sea fan, H. Larson, 02 February 1977; BPBM 41144, 7 specimens (5 males, 19.1-22.0 mm SL & 2 females, 14.8-16.5 mm SL), same data as holotype; BPBM 41146, male, 24.4 mm SL, cleared and stained, drop-off in 22 m, commensal on a sea fan, other data same as holotype; NSMT-P 114575, male, 18.2 mm SL, same data as BPBM 41146; USMN 410095, a male, 23.8 mm SL & a female, 17.0 mm SL., same data as BPBM 41146.

**Diagnosis:** Dorsal-fin rays VI + I, 8; anal-fin rays



**Fig. 1.** Head of holotype of *Bryaninops annella* n. sp., BPBM 41022, showing cephalic sensory pores and papillae. Top: dorsal view; middle: lateral view; bottom: ventral view. Red lines and red letters indicate sensory canal pores, and prime marks the terminal pores; AN: anterior nasal pore; PN: posterior nasal pore. Yellow dots represent the sensory papillae. Arrow shows position where gill membranes are attached to isthmus. Drawing by T. Suzuki.

**Table I.** Counts and measurements for *Bryaninops annella*.

Cat. No.	BPBM 41022		AMS I. 24075-002, BPBM 41144, 41146, NSMT-P 114575 & USNM 410095			
Type	Holotype		Paratypes			
Sex	Male		9 males		9 females	
First dorsal fin	VI		VI		VI	
Second dorsal fin	I, 8		I, 8		I, 8	
Anal fin	I, 8		I, 8		I, 8	
Pectoral fin	14		14-15		13-14	
Pelvic fin	I, 5		I, 5		I, 5	
Segmented rays of caudal fin	9+8		8-9+7-8		9+8	
Branched rays of caudal fin	6+5		6-7+5		5-7+4-5	
Longitudinal scales series	40		34-45		34-42**	
Transverse scales rows backward	9		8-10		8-10	
	mm	% in SL	mm	% in SL	mm	% in SL
Standard length	26,6		19.1-24.4		14.8-18.7	
Head length	7,5	28%	5.6-7.1	28-31%	4.3-5.6	29-32%
Head depth	3,7	14%	2.6-3.5	13-16%	2.0-2.9	13-16%
Head width	4,1	15%	2.9-4.1	14-18%	2.2-2.9	15-17%
Body depth at anus	3,3	13%	2.4-3.2	12-14%	1.9-2.6	11-15%
Caudal-peduncle length	6,1	23%	4.0-5.6	21-23%	2.9-4.3	19-24%
Caudal-peduncle depth	2,0	8%	1.4-2.0	7-9%	1.1-1.7	7-10%
Pectoral fin length	4,6	17%	3.3-4.3*	17-20%	2.6-3.3	16-20%
Pelvic fin length	2,2	8%	2.5-3.1	11-13%	1.9-2.4	11-14%
Caudal fin length	4,8	18%	3.5-4.5**	18-20%	2.6-3.5	18-20%
Snout length	2,3	9%	1.6-2.2	8-10%	1.2-1.7	8-9%
Eye diameter	1,9	7%	1.5-2.0	8%	1.3-1.5	8-9%
Upper jaw length	3,3	13%	2.3-3.1	12-14%	1.7-2.4	11-13%
Fleshy interorbital width	1,0	4%	0.5-0.9	2-4%	0.4-0.7	2-4%
	% in HL		% in HL		% in HL	
Snout length	30%		28-33%		26-31%	
Eye diameter	25%		25-29%		26-31%	
Upper jaw length	44%		40-46%		38-42%	
Fleshy interorbital width	13%		8-12%		7-13%	

\*: 7 paratypes, \*\*: 8 paratypes.



**Fig. 2.** Holotype of *Bryaninops annella* n. sp., BPBM 41022, male, 26.6 mm SL, Indonesia, Bali, northwest coast, Tulamben. Photo by T. Suzuki.

I, 8; modal pectoral-fin rays 14, central 8 to 12 rays branched; scales on body reaching to above upper end of pectoral-fin base or posterior end of opercle, the longitudinal scale series 34-45; transverse scale rows 8-10; body elongate, the depth at anus 11-15% SL; head width slightly greater than head depth; snout short, 26-33% HL; eye 25-31% HL; upper jaw slightly protruding; gill opening extending forward to a vertical at or slightly beyond posterior edge of preopercle; no recurved canine teeth on mid-side of lower jaw; caudal fin truncate; pelvic disc round and cup-like; each pelvic spine flattened to a lobe and joined to frenum, with a wide anteriorly-directed pocket; pinkish gray in life, with a broad, blotchy, orange-red stripe extending posteriorly from ventral two-thirds of eye, narrowing posterior to abdomen, and continuing to base of caudal fin; upper lip and snout blotchy orange-red; fins translucent with pale pink

rays; iris maroon with a narrow yellow ring around deep green pupil.

**Description:** Dorsal-fin rays VI + I, 8; anal-fin rays I, 8; pectoral-fin rays 14 (13 in four paratypes; 15 in one paratype), central ten rays branched (8 in one paratype; 9 in two paratypes; 11 in three paratypes; 12 in one paratype; broken in one paratype); longitudinal scale series 40 (34-45, mean of 40 in 17 paratypes); transverse scale rows 9 (8-10, mean of 9 in 18 paratypes); segmented caudal rays 9+8 (8+7 in two paratypes); branched caudal rays 6+5 (5+4 in two paratypes; 7+5 in two paratypes).

Body elongate and moderately compressed, body depth at anus 13% SL (11-15% in 18 paratypes); head length 28% SL (28-32% in 18 paratypes); head width slightly greater than head depth (equal in four paratypes); head depth 49% HL (46-52% in 18 paratypes); eye large, placed laterally and

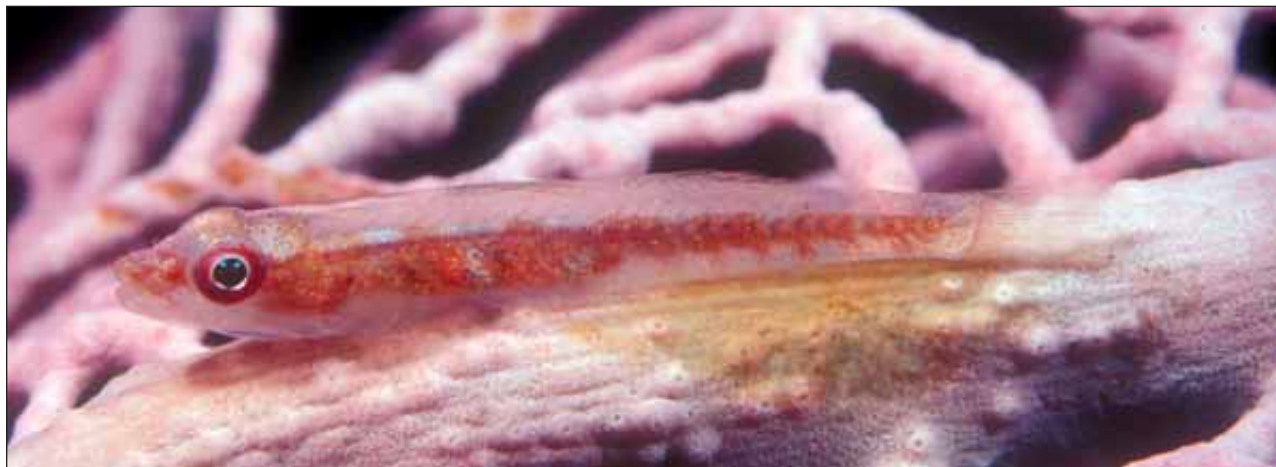


Fig. 3. *Bryaninops annella* n. sp., Indonesia, Bali, northwest coast, Tulamben. Photo by J. E. Randall.



Fig. 4. *Bryaninops annella* n. sp., Indonesia, Banda Sea, Kakabia, 6°53'25"S, 122°14'59"E, 25 m. Photo by J. E. Randall.

extending slightly above dorsal profile, 25% HL (25-31% in 18 paratypes); snout short, longer than eye (equal in six paratypes; shorter in two paratypes), 30% HL (26-33% in 18 paratypes); dorsal profile of snout slightly convex before eye and above upper lip. Mouth slightly oblique; upper jaw reaching posterior to anterior edge of pupil (reaching to a vertical at anterior edge of pupil in 8 paratypes); upper jaw slightly protruding. Gill opening narrow, reaching anteroventrally to a vertical at posterior edge of preopercle (slightly beyond posterior edge of preopercle in 12 paratypes).

The following characters are based on a cleared and stained paratype (BPBM 41146, male, 24.4 mm SL): gill rakers 0+9; teeth in both jaws conical, inwardly curved; five large teeth on each side at front of upper jaw, two to three rows of small teeth anteriorly, two rows centrally and posteriorly, outer row with 10 medium-sized teeth, inner row with small teeth; two large teeth on inner side at front of lower jaw; five to six rows anteriorly, outer row with 10 medium-sized teeth, inner rows with small teeth; a single row of medium teeth centrally and posteriorly.

Cephalic sensory systems shown in Fig. 1; anterior oculoscapular canal with pores B', C<sub>1</sub> pore of left side open, but right side one not open, C<sub>2</sub>, single D, E, F and G' (B', C, single D, E, F and G' in 11 paratypes; B', C, D, E, F and G' in one paratype); three preopercular-canal pores, M', N and O'.

Scales ctenoid; scales on body reaching forward to above posterior edge of opercle (above upper end of pectoral-fin base in 12 paratypes); some scales midlaterally on caudal peduncle about twice as large as other scales on peduncle; head (except above opercle), breast, base and axilla of pectoral fins, under pelvic fins, and midline of abdomen naked (also naked, a narrow area below first dorsal fin in 7 paratypes).

First dorsal fin triangular; the first to fourth spines of dorsal fin longest (relative length of spines variable in paratypes); second dorsal fin higher than first dorsal fin, the rays progressively shorter posteriorly; anal fin lower than second dorsal fin, the middle rays longest; rays of pectoral fins reaching posterior to pelvic fins, but not to anus; pelvic fins short, 13% SL (11-14% in 18 paratypes), the disc round and cup-like; each pelvic spine flattened to a lobe and joined to frenum, with a wide anteriorly-directed pocket; caudal fin truncate with rounded corners.

Color of holotype in preservative

(Fig. 2): body pale yellow with scattered dark orange dots, progressively more numerous posteriorly; an irregular orangish brown streak midlaterally on posterior half of body, breaking into a series of indistinct spots posteriorly; postorbital head pale yellow, except most of opercle and ventral part of head below preopercle and a gray patch dorsoposterior to eye; snout and lips light gray; iris dark bluish gray; median and pelvic fins pale gray; pectoral fins translucent.

Color in life (Fig. 3 & 4): translucent pinkish gray, with a broad red stripe containing orangish blotches extending posteriorly from ventral two-thirds of eye, narrowing posterior to abdomen and continuing to base of caudal fin; upper lip and snout blotchy orange-red; an oblique whitish blotch within red stripe below dorsal fin; brain whitish with red dots; fins translucent with pale pink rays; iris maroon with a narrow yellow ring around deep green pupil; dorsomedial side of protruded part of eyeballs yellowish with red dots.

**Distribution:** The specimens on which we based the above description of *Bryaninops annella* are from Tulamben on the northeast coast of Bali and the island of Kakabia in the Banda Sea between Sulawesi and Flores. Noting that paratypes of *Bryaninops loki* were listed by Larson (1985: 82) as collected from a sea fan at Lizard Island, Great Barrier Reef, we requested a loan and determined they are *B. annella*. This species is probably wide-ranging in the East Indian region, as indicated by underwater photographs of a like-colored goby on the same species of sea fan, including one from Kimbe Bay, New Britain. However, because *Bryaninops annella* is so similar in life color to *B. loki*, and may occur on the same species of sea fan, such photos cannot be positively linked to *B. annella*. An exception is the one photographed by the second author at Kakabia, because of its estimated total length of 32 mm. *Bryaninops loki* is not known to exceed 28.5 mm in total length.

**Etymology:** This species is named *annella* in reference to its being commensal on the large sea fan *Annella mollis* (Nutting 1910).

**Remarks:** *Bryaninops annella* is similar to *B. amplus* Larson, *B. loki* Larson and *B. tigris* Larson with which it shares a rounded and cup-like pelvic fin, second dorsal and anal fin-rays counts, and slender head and body. It differs from these three species in having the gill opening extending forward to or slightly beyond a vertical at posterior margin of preopercle (vs. extending to below pec-

toral-fin base in *B. amplus* and *B. tigris*, and forward to posterior margin of orbit in *B. loki*). *Bryaninops annella* also differs from the first two species in having: the upper jaw slightly protruding (vs. jaws equal in *B. amplus*, and jaws equal or the lower jaw slightly protruding in *B. loki*); longitudinal scale series 34-45 (mean of 40) and transverse scale rows 8-10 (mean of 9) [vs. 37-69 (mean of 53) and 5-17 (mean of 13), respectively in *B. amplus*, and 33-53 (mean of 47) and 6-12 (mean of 10), respectively in *B. loki*]. In addition, *B. annella* differs from *B. loki* in having the pectoral fins reaching beyond the end of the pelvic fins (vs. not reaching beyond in *B. loki*), and in having modally one fewer pectoral rays based on 19 specimens of *annella* and 13 specimens of *loki* (Table III). *Bryaninops annella* also attains a larger average size. Of 22 lots of *B. loki* listed as type material, only two contain specimens 22 mm SL or longer; by contrast, five of the six lots of *B. annella* contain specimens longer than 22 mm SL.

**Comparative material:** *Bryaninops loki*, ROM 42738, paratypes, 10 specimens, 9-19 mm SL, Chagos Archipelago, Salomon Atoll, 21 March 1979; AMS I. 24075-001, paratypes, 3 specimens (2 males & 1 female), 16.3-18.3 mm SL, Australia, Queensland, Lizard Island, 14°42' S, 145°27' E, drop-off in 18 m, midway between South and Bird islands, from a sea fan, 02 February 1977.

### *Bryaninops earlei*, n. sp.

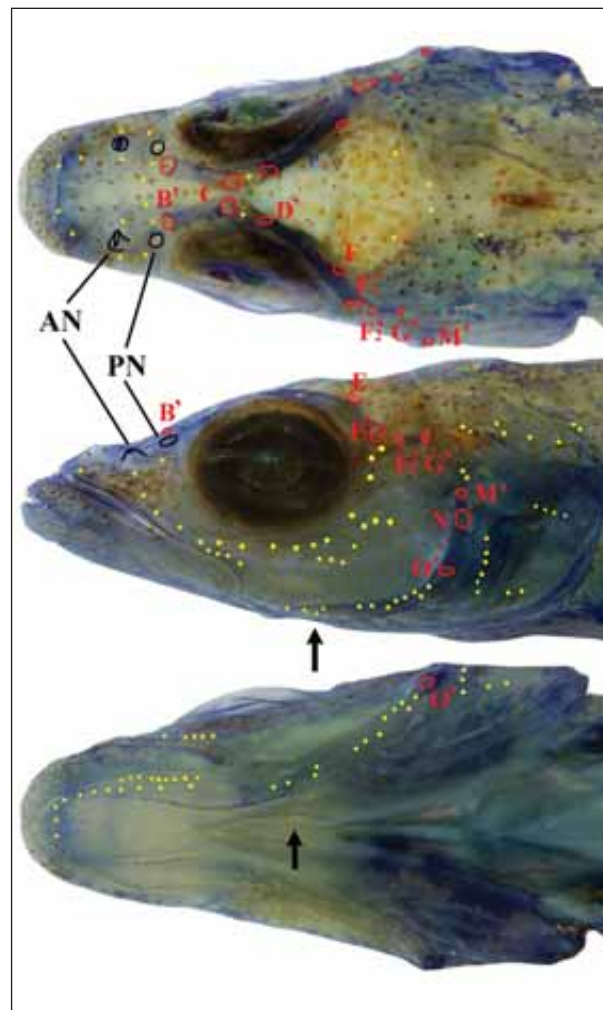
(Table II; Figs 5-7)

**Holotype:** BPBM 36972, male, 12.1 mm SL, Papua New Guinea, D'Entrecasteaux Islands; Normanby Island, Bunama, 10°8' 36" N, 151°9' 18" E, on sea pen in sea grass bed, 4-5 m, J. L. Earle & J. E. Randall, 11 December 1995.

**Paratypes:** BPBM 36954, female, 12.0 mm SL, same locality as holotype, on sea pen, 8 m, J. E. Randall, 10 December 1995; NSMT-P 114576, 4 specimens (1 male, 12.7 mm SL, 2 females, 11.4-12.5 mm SL & 1 subadult, 8.8 mm SL), on sea pen and adjacent sea grass, other data same as holotype; USNM 410094, 3 specimens (1 male, 14.0 mm SL, cleared and stained & 2 females, 11.4-13.3 mm SL), same data as NSMT-P 114576.

**Diagnosis:** Dorsal-fin rays VI + I, 7-8; anal-fin rays I, 7-8; modal pectoral-fin rays 15, some middle rays branched; scales on body reaching forward dorsally to between middle of opercle or slightly

anterior to posterior margin of preopercle; midline of nape naked; longitudinal scale series 22-25; transverse scale rows 6 or 7; body depth at anus 12-17% SL; head length 29-31% SL; head width slightly greater than head depth; head depth 49-62% HL; snout length 24-30% HL; lower jaw slightly protruding, rounded in ventral view; gill opening wide, extending forward to below posterior edge of orbit; no interconnecting sensory canal above posterior edge of eye; no curved canine tooth at mid-side of lower jaw; pelvic fins cup-like; pelvic



**Fig. 5.** Head of holotype of *Bryaninops earlei* sp. nov., BPBM 36972, showing cephalic sensory pores and papillae. Top: dorsal view; middle: lateral view; bottom: ventral view. Red lines and red letters indicate sensory canal pores, and prime marks the terminal pores; (S) means a single pore; AN: anterior nasal pore; PN: posterior nasal pore. Yellow dots represent sensory papillae. Arrow shows position where gill membranes are attached to isthmus. Drawing by T. Suzuki.

**Table II.** Counts and measurements for *Bryaninops earlei*.

Cat. No.	BPBM 36972		BPBM 36954, NSMT-P 114576 & USMN 410094					
Type	Holotype		Paratypes					
Sex	Male		2 males		5 females		one subadult	
First dorsal fin	VI		VI		VI		VI	
Second dorsal fin	I, 8		I, 7-8		I, 7		I, 7	
Anal fin	I, 8		I, 8		I, 7-8		I, 7	
Pectoral fin	15		14-15		14-16		15	
Pelvic fin	I, 5		I, 5		I, 5		I, 5	
Segmented rays of caudal fin	8+8		9+8		9+8		9+8	
Branched rays of caudal fin	6+5		6+5		6+5*		broken	
Longitudinal scales series	24		23-25		24-25		22	
Transverse scales rows backward	7		6-7		6-7		7	
	mm	% in SL	mm	% in SL	mm	% in SL	mm	% in SL
Standard length	12,1		12.7-14.0		11.4-13.3		8,8	
Head length	3,8	31%	4.0-4.3	31%	3.4-3.9	29-31%	2,7	31%
Head depth	1,9	16%	2.0-2.3	16%	1.8-2.2	15-18%	1,3	15%
Head width	2,2	18%	2.3-2.5	18%	1.8-2.4	16-19%	1,5	17%
Body depth at anus	1,5	13%	1.7-2.0	13-14%	1.5-2.1	13-17%	1,0	12%
Caudal-peduncle length	2,4	20%	2.5-2.9	19-21%	2.4-2.6	19-22%	2,2	25%
Caudal-peduncle depth	1,0	8%	1.0-1.2	8-9%	0.9-1.0	8-9%	0,6	7%
Pectoral fin length	2,6	21%	2.9-3.4	22-24%	2.4-2.9	21-25%	2,0	23%
Pelvic fin length	1,8	15%	1.9-2.0	14-15%	1.5-1.8	13-15%	1,5	17%
Caudal fin length	2,9	24%	2.9-3.5	23-25%	2.5-2.9	21-23%	1,9	22%
Snout length	1,0	9%	1,2	9%	0.9-1.0	8-9%	0,7	8%
Eye diameter	1,0	9%	1.0-1.1	8%	0.9-1.0	8-9%	0,7	8%
Upper jaw length	1,6	13%	1,7	12-13%	1.4-1.6	12-13%	1,0	11%
Fleshy interorbital width	0,4	4%	0.4-0.5	3-4%	0.3-0.5	3-4%	0,3	3%
	% in HL		% in HL		% in HL		% in HL	
Snout length	28%		28-30%		24-30%		25%	
Eye diameter	28%		26%		24-30%		26%	
Upper jaw length	43%		40-42%		39-44%		37%	
Fleshy interorbital width	11%		10-12%		10-14%		11%	

\*: 4 paratypes.



**Fig. 6.** Holotype of *Bryaninops earlei* n. sp., BPBM 36972, male, 12.1 mm SL, Papua New Guinea, D' Entrecasteaux Islands; Normanby Island, Bunama. Photo by T. Suzuki.



frenum with anteriorly-facing pocket; caudal fin rounded to truncate; head and body translucent pale blue dorsally (vertebral column visible as a dark brown band), crossed by 10 yellowish brown bars; side of body yellowish brown, all of head and body densely speckled with dark brown. A small species, the largest specimen measures 14.0 mm SL.

**Description:** Dorsal-fin rays VI + I,8 (7 in six paratypes); anal-fin rays I,8 (7 in three paratypes); pectoral-fin rays 15 (14 in three paratypes; 16 in one paratype), eight rays branched (3-9 in seven paratypes; none branched in one subadult paratype); longitudinal scale series 24 (22-25 in paratypes); transverse scale rows 7 (6 in five paratypes); segmented caudal rays 8+8=16 (9+8=17 in eight paratypes); branched caudal rays 6+5=11 (broken in two paratypes).

Body elongate and moderately compressed; body depth at anus 13% SL (12-17% in eight paratypes); head length 31% SL (29-31% in eight paratypes); head width slightly greater than head depth (smaller in one paratype; equal in two paratypes); head depth 50% HL (49-62% in eight paratypes); eye large, placed laterally, and extending slightly above dorsal profile, 28% HL (24-30% in eight paratypes); snout equal to eye diameter (slightly longer than eye in two paratypes), and rounded in dorsal view; dorsal profile of snout concave before eye and convex above upper lip; mouth slightly oblique; jaws reaching posterior to a vertical at anterior edge of pupil; lower jaw slightly pro-

truding; gill opening wide, reaching anteroventrally to below posterior edge of pupil.

The following characters are based on cleared and stained largest paratype of USNM 410094 (male, 14.0 mm SL): gill rakers 0+9; teeth in both jaws conical, inwardly curved; nine large teeth on each side at front of upper jaw, three to four rows of small teeth anteriorly, two rows centrally and posteriorly, outer row with 15 medium-sized teeth, inner row with small teeth; two large teeth at front of lower jaw, four to five rows of small teeth anteriorly, two rows of medium-sized teeth centrally and posteriorly.

Cephalic sensory system shown in Fig. 5; anterior oculoscapular-canal pores B'-C', D'-E-F<sub>1</sub>', F<sub>2</sub>'-G' (no pores in a subadult paratype; a groove instead of F<sub>2</sub>'-G' canal in one paratype); three preopercular-canal pores, M', N and O' (no pores in a subadult paratype).

Scales ctenoid; scales on body reaching forward to above middle of opercle (beyond posterior margin of preopercle in one paratype; no scales on nape and below first dorsal fin in a subadult paratype); midline of nape naked, but 6 scales along midline (5, 7, and 9 in paratypes; absent in a subadult paratype); rest of head, breast, base and axilla of pectoral fin, anterior part of abdomen, and midline of posterior part of abdomen naked (entire abdomen naked in two paratypes, including the subadult).

First dorsal fin triangular, the third spine of dorsal fin longest (second to third in one paratype), higher than second dorsal fin (equal in three



**Fig. 7.** Paratype of *Bryninops earlei* n. sp., Papua New Guinea, D'Entrecasteaux Islands, Normanby Island, Bunama. Photo by J. E. Randall.

paratypes; lower in two paratypes); tips of third to sixth dorsal spines reaching origin of second dorsal fin (not reaching in female and subadult paratypes; beyond in a male paratype); second dorsal fin high anteriorly, low posteriorly; anal fin lower than second dorsal fin (equal in one paratype), middle rays longest; pectoral fins reaching a vertical at genital papillae; pelvic fins short, 15% SL (13-17% in eight paratypes), the disc round and cup-like; each pelvic spine flattened to a lobe and joined to frenum, with a wide anteriorly-directed pocket; caudal fin round to truncate.

Color of holotype in preservative (Fig. 6): yellow, finely speckled with reddish brown dots; a series of 15 faint, close-set, curving, orangish bars on mid-side of body to caudal peduncle; head yellow, less densely speckled with reddish brown dots; white dorsally on snout and interorbital, narrowing onto nape; a narrow reddish brown stripe on side of snout and extending, slightly broader, posterior to eye; orbit with a narrow orange margin; median and pelvic fins translucent bluish white, the dorsal fins finely stippled with brown, the caudal with blue dots on rays and an orange-yellow spot of about pupil diameter dorsally at base of fin.

Color of paratype in life (BPBM 36954; Fig. 7): translucent pale blue dorsally on head and body (vertebral column visible as a dark brown band), crossed by 10 yellowish brown bars; side of body yellowish brown; all of head and body densely speckled with dark brown, most heavily and more darkly speckled over abdomen; dorsal fins with yellowish brown rays and transparent membranes dotted with brownish yellow, the outer margin broadly brownish yellow; anal and caudal fins translucent yellow with brown rays stippled in dark brown; iris densely stippled with black except dorsally where golden, speckled with dark brown; a very narrow yellow ring around pupil.

**Distribution and Habitat:** Presently known only from Normanby Island, D'Entrecasteaux Islands, Papua New Guinea. First detected on and collected from an unidentified sea pen and adjacent seagrass at a depth of 4.5 m.

**Etymology:** This species of goby is named for John L. Earle, who first discovered it and collected specimens with the second author.

**Remarks:** *Bryaninops earlei* differs from all other congeners in having large ctenoid scales (22-25 in longitudinal scale series). It is similar to *B. natans*, with which it shares the lack of a canal connecting

posterior interorbital pores, but clearly differs in having scales on the nape reaching forward to above the opercle (compared to lacking scales anteriorly on the body of *B. natans*). Also *B. earlei* is drably colored, compared to *B. natans* with its pink eye and bright yellow abdomen.

### *Bryaninops tectus*, n. sp.

(Tables III-IV; Figs 8-9)

*Bryaninops loki* – Larson. 1985: 81 (in part, Great Barrier Reef).

**Holotype:** BPBM 29316, male, 19.0 mm SL, formerly registered as one of paratypes of *B. loki*, Great Barrier Reef, Linnet Reef, west side of reef, 6-15 m, from the gorgonian *Ellisella quadrilineata*, caught by hand, H. K. Larson, 22 November 1975.

**Paratypes:** BPBM 44150, female, 16.7 mm SL, formerly registered as a part of BPBM 29316, same data as holotype; NSMT 114626, a female, 16.1 mm SL & a subadult, 10.5 mm SL, same data as BPBM 44150; USMN 410731, a male, 17.6 mm SL, cleared and stained & a subadult, 8.7 mm SL, same data as BPBM 44150

**Diagnosis:** Dorsal-fin rays VI + I, 8; anal-fin rays I, 8; pectoral-fin rays 16, some middle rays branched; scales on body reaching forward dorsally to end of second dorsal-fin, and absent ventrally; longitudinal scale series 39-50 (except 8.7 and 10.5 mm SL subadults), transverse scale rows 8-11 (except 8.7 and 10.5 mm SL subadults); body depth at anus 10-11% SL; head length 30-33% SL; head width slightly greater than head depth; head depth 42-50% HL; snout length 25-30% HL; anterior and posterior nostrils absent; lower jaw slightly protruding; gill opening reaching anteroventrally to below between posterior half and end of preopercle; two curved canine tooth at mid-side of lower jaw; pelvic fins cup-like; pelvic frenum with anteriorly-facing pocket; caudal fin truncate; color in alcohol dull orange-red, grading to yellow posteriorly on caudal peduncle and base of caudal fin; snout and lips dull yellow; dorsal fins with whitish rays, transparent membranes, and yellow along the base; caudal and pectoral fins with light yellowish rays and translucent membranes.

**Description:** Dorsal-fin rays VI + I, 8; anal-fin rays I 8; pectoral-fin rays 16, tips of ten rays branched (three rays branched in one paratype, none branched in four paratypes); longitudinal scale series

**Table III.** Pectoral-ray counts of species of *Bryaninops*.

	13	14	15	16	17
<i>B. annella</i>	7	29	2		
<i>B. loki</i>		3	21	3	1
<i>B. tectus</i>			2	8	2
Counted both sides					

50 (37, 47, 48 in three paratypes; 22 in a subadult paratype; scales absent in smallest paratype); transverse scale rows 11 (8, 9, 9 in three paratypes; 1 in a subadult paratype; scales absent in smallest paratype); segmented caudal rays 9+8=17 (15 in two subadult paratypes); branched caudal rays 11.

Body elongate and rather compressed; body depth at anus 10% SL (11% in one paratype); head length 31% SL (30-33% in five paratypes); head width slightly greater than head depth (equal in a subadult paratype); head depth 45% HL (42-50% in five paratypes); eye large, placed laterally and extending slightly above dorsal profile, 27% HL (23-26% in five paratypes); snout equal to eye diameter (slightly longer than eye in four paratypes); dorsal profile of snout concave before eye and convex above upper lip; anterior and posterior nostrils absent; mouth slightly oblique; jaws reaching posteriorly to a vertical at anterior edge of pupil; lower jaw slightly protruding; gill opening wide, reaching anteroventrally to below between posterior half and end of preopercle.

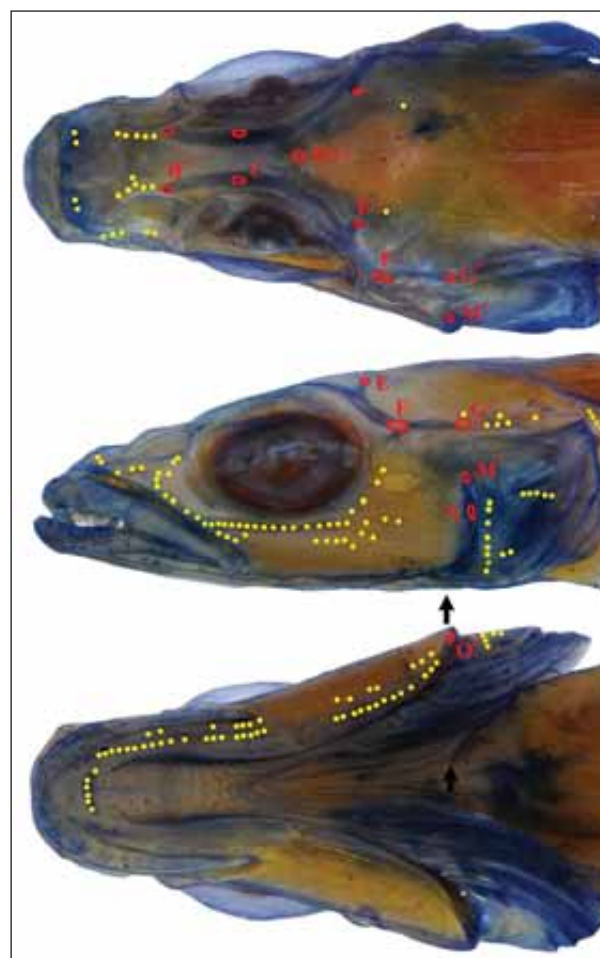
The following characters are based on cleared and stained largest paratype in USNM 410094 (male, 14.0 mm SL): gill rakers 2+9; teeth in both jaws conical, inwardly curved; five large teeth on each side at front of upper jaw, two to three rows of small teeth anteriorly, two rows centrally and posteriorly, outer row with 10 medium-sized teeth, inner row with small teeth; four and two large teeth on out and inner sides at front of lower jaw respectively, and two large teeth near middle of outside of jaw; two to three rows of small teeth anteriorly, a row of small teeth centrally, and a row of 6 medium-sized teeth posteriorly.

Cephalic sensory system shown in Fig. 8; anterior oculoscapular-canal pores B', C, single D, E, F and G' (double D in two paratypes; D', E', and four grooves instead of canal in a subadult paratype; no pore and no groove in smallest subadult paratype); three preopercular-canal pores, M', N and O' (M' and N fused in one paratype; a groove instead of canal in smallest subadult paratype).

Scales ctenoid; scales dorsally on body reaching

forward to below end of second dorsal-fin, and laterally reaching forward to above base of pectoral fin (to below fifth spine base of first dorsal fin in one paratype; only single row on midlateral line reaching below the origin of second dorsal fin in one subadult paratype; no scale in smallest subadult paratype); nape naked except for 2 isolated scales below origin of first dorsal fin (no isolated scale in five paratypes); rest of head, breast, abdomen, base and axil of pectoral fins, and dorsal part of body below first dorsal fin naked except for an isolated scale (no isolated scale in four paratypes); a narrow naked zone below second dorsal fin and above anal fin; ventral side of caudal peduncle naked.

First dorsal fin broken (triangular and the third



**Fig. 8.** Head of holotype of *Bryaninops tectus* n. sp., BPBM 29316, showing cephalic sensory pores and papillae. Top: dorsal view; middle: lateral view; bottom: ventral view. Red lines and red letters indicate sensory canal pores, and prime marks the terminal pores. Yellow dots represent the sensory papillae. Arrow shows position where gill membranes are attached to isthmus. Drawing by T. Suzuki.

**Table IV.** Counts and measurements for *Bryaninops tectus*.

Cat. No.	BPBM 29316		USMN 410731		BPBM 41150 & NSMT 114626		NSMT 114626 & USMN 410731	
Type	Holotype		Paratypes					
Sex	Male		one males		two females		two subadults	
First dorsal fin	VI		VI		VI		VI	
Second dorsal fin	I, 8		I, 8		I, 8		I, 8	
Anal fin	I, 8		I, 8		I, 8		I, 8	
Pectoral fin	16		16		16		16	
Pelvic fin	I, 5		I, 5		I, 5		I, 5	
Segmented rays of caudal fin	9+8		9+8		9+8		8+7	
Branched rays of caudal fin	6+5		6+5		6+5		0	
Longitudinal scales series	50		48		39, 47		0 · 22	
Transverse scales rows backward	11		9		8 · 9		0 · 1	
	mm	% in SL	mm	% in SL	mm	% in SL	mm	% in SL
Standard length	19,0		17,6		16.1 · 16.7		8.7 · 10.5	
Head length	5,9	31%	5,5	31%	4.8 · 5.2	30 · 31%	2.9 · 3.3	32 · 33%
Head depth	2,7	14%	2,4	14%	2.1 · 2.2	13%	1.3 · 1.7	15 · 16%
Head width	3,1	17%	2,9	16%	2.4 · 2.8	15 · 16%	1.4 · 1.7	16%
Body depth of anus	1,9	10%	1,7	10%	1.7 · 1.8	10 · 11%	0.9 · 1.1	10%
Caudal-peduncle length	3,3	18%	3,3	19%	3.2 · 3.3	20%	1.6 · 1.9	18 · 19%
Caudal-peduncle depth	1,5	8%	1,3	8%	1,2	7%	0.6 · 0.8	7%
Pectoral fin length	3,3	18%	3,5	20%	2.9 · 3.2	18 · 19%	1.9 · 2.1	20 · 21%
Pelvic fin length	2,4	13%	2,1	12%	1.9 · 2.1	12 · 13%	1.0 · 1.3	12%
Caudal fin length	3,5	19%	3,3	19%	3.0 · 3.1	18 · 19%	1.4 · 2.1	16 · 20%
Snout length	1,7	9%	1,5	9%	1.4 · 1.5	9%	0.7 · 0.9	8 · 9%
Eye diameter	1,6	9%	1,3	8%	1.2 · 1.3	7 · 8%	0.7 · 0.9	8%
Upper jaw length	2,3	12%	2,1	12%	1.8 · 2.0	11 · 12%	1.0 · 1.3	11 · 12%
Fleshy interorbital width	0,8	4%	1,0	5%	0.8 · 0.9	5%	0,6	6 · 7%
	% in HL		% in HL		% in HL		% in HL	
Snout length	29%		28%		29 · 30%		25 · 27%	
Eye diameter	27%		24%		25%		23 · 26%	
Upper jaw length	39%		38%		38%		35 · 39%	
Fleshy interorbital width	14%		17%		16 · 17%		19 · 22%	

\*: 4 paratypes.



**Fig. 9.** Holotype of *Bryaninops tectus* n. sp., BPBM 29316, male, 19.0 mm SL, Great Barrier Reef, Linnet Reef, west side of reef. Photo by T. Suzuki.

spines of dorsal fin longest in four paratypes); second dorsal fin higher than first dorsal fin anteriorly, lower posteriorly; anal fin lower than second dorsal fin; pectoral fins to reaching beyond past end of pelvic fins, but not reaching anus; pelvic fins short, 13% SL (12-13% in five paratypes), the disc oval and cup-like; each pelvic spine flattened to a lobe and joined to frenum, with a wide anteriorly-directed pocket; caudal fin truncate.

Color of holotype in preservative (Fig. 9): head and body dull orange-red, grading to brownish yellow on snout and to yellow posteriorly on caudal peduncle; dorsal fins with whitish rays, translucent membranes, and yellow along base; caudal and pectoral fins with light yellow rays and translucent membranes; orbit rimmed in reddish; iris reddish gray.

**Distribution:** Presently known only from Linnet Reef of the Great Barrier Reef.

**Etymology:** This species is named *Bryaninops tectus* from the Latin meaning secret, hidden, or disguised, in reference to its being misidentified as another species.

**Remarks:** *Bryaninops tectus* is similar to *B. nexus* Larson and *B. erythroptus* (Jordan and Seale) in lacking anterior and posterior nostrils. It differs from these two species in not having ctenoid scales below second dorsal fin, above anal fin, and ventral side of caudal peduncle (vs. scales present at these sites in the other species), mean lateral-scale count 46 in adults (vs. mean of 37 in *B. nexus*, and 41 in *B. erythroptus*); mean body depth at anus 10% SL (vs. 15% in *B. nexus*, and 16% in *B. erythroptus*); mean orbit diameter 25% (vs. 38% in *B. nexus*, and 32% in *B. erythroptus*); gill opening anteroventrally to below a vertical between posterior half and end of preopercle (vs. below middle to posterior half of eye in *B. nexus*, and below posterior edge or posterior half of eye in *B. erythroptus*).

*Bryaninops tectus* is also similar to *B. loki*. Our six type specimens were the Bishop Museum's one lot of paratypes of *B. loki*, which we discovered when the pectoral-ray counts were modally one higher than the modal 15 of *B. loki* (Table III). Other more obvious differences from *B. loki* include a deeper body (average 14% SL, compared to 10% in *B. tectus*), presence of nostrils, longer gill opening (usually reaching orbit in *B. loki*, compared to below posterior half of preopercle in *B. tectus*), and scales dorsally on body reaching below origin of first dorsal fin in *B. loki*, compared to below posterior end of the second dorsal fin in *B. tectus*.

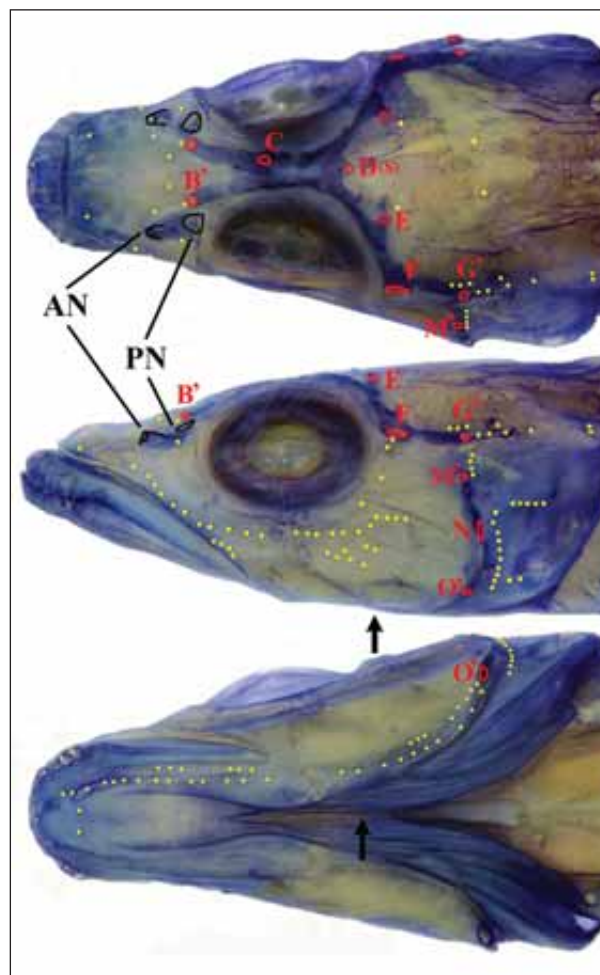
### *Bryaninops translucens*, n. sp.

(Table V; Figs 10-12)

**Holotype:** BPBM 37642, male, 22.8 mm SL, Indonesia, Mentawai Islands, Siberut Island, Sarabua Bay, 1°28.8' S, 99°9.7' E, commensal on unidentified, horizontally elongate, cylindrical sponge, J. E. Randall, 23 April 1997.

**Paratype:** BPBM 41147, female, 16.9 mm SL, cleared and stained, same data as holotype.

**Diagnosis:** Dorsal-fin rays VI + I, 8; anal-fin rays I, 8; pectoral-fin rays 14-15, central six rays branched; scales on body reaching to above poste-



**Fig. 10.** Head of holotype of *Bryaninops translucens* n. sp., BPBM 37642, showing cephalic sensory pores and papillae. Top: dorsal view; middle: lateral view; bottom: ventral view. Red lines and red letters indicate sensory canal pores, and prime marks the terminal pores; AN: anterior nasal pore; PN: posterior nasal pore. Yellow dots represent the sensory papillae. Arrow shows position where gill membranes are attached to isthmus. Drawing by T. Suzuki.

rior opercle; longitudinal scale series 46-49; transverse scale rows 9-11; body elongate, depth at anus 13% SL; head width slightly greater than head depth; snout short, 30-31% HL; eye 25-30% HL; lower jaw slightly protruding; gill opening extending forward nearly to a vertical at posterior edge of orbit; two pairs of recurved canine teeth on mid-side of lower jaw; caudal fin truncate; pelvic disc broadly oblong and flat, not reaching genital papilla; each pelvic spine flattened to a lobe and joined to frenum, with a wide anteriorly-directed pocket; translucent in life, except for a narrow red stripe on side of snout and a broad red stripe ventrally on postorbital head and body; light yellow in alcohol, except whitish on snout, lips, and fin rays.

**Description:** Dorsal-fin rays VI + I, 8; anal-fin rays I, 8; pectoral-fin rays 15 (14), central six rays branched; longitudinal scale series 49 (46); transverse scale rows 11 (9); segmented caudal rays 9+8; branched caudal rays 6+5.

Body elongate and moderately compressed; body depth at anus 13% SL; head length 30% SL; head width slightly greater than head depth; head depth 48% HL (45%); eye large, placed laterally and extending slightly above dorsal profile, 25% HL (30%); snout short, slightly longer than eye (equal to eye), 31% HL (30%) and rounded in dorsal view; dorsal profile of snout slightly convex before eye and above upper lip. Mouth slightly oblique; upper jaw reaching posterior to a vertical at anterior edge of pupil (beyond anterior edge of pupil); lower jaw slightly protruding. Gill opening wide, reaching anteroventrally nearly to a vertical at posterior edge of orbit.

The following characters are based on a cleared and stained paratype in BPBM 41147 (female, 16.9 mm SL): to gill rakers 0 + 10; teeth in both

jaws conical, inwardly curved; four large teeth on each side at front of upper jaw, two to three rows of medium-sized teeth anteriorly, two rows centrally and posteriorly, outer row with eight medium-sized teeth, inner row with small teeth; a large tooth on inner side at front of lower jaw, and two large teeth near middle of outside of jaw; three rows of small teeth anteriorly, narrowing to single row of small teeth centrally and posteriorly.

Cephalic sensory systems shown in Fig. 10; anterior oculoscapular canal with pores B', C of right side open but left side one not open, single D, E, F, and G' (B', C, single D, E, F, and G'); three preopercular-canal pores, M', N and O'.

Scales ctenoid; scales on body reaching forward to above posterior part of opercle; nape naked except for 4 scales dorsally along midline; rest of head, breast, base and axilla of pectoral fin, and midline of abdomen naked.

First dorsal fin trapezoid (triangular); the first to fourth spines of dorsal fin longest (second spine longest); second dorsal fin higher than first dorsal fin anteriorly, lower posteriorly; anal fin lower than second dorsal fin; pectoral fins not reaching past end of pelvic fins; pelvic fins moderately long, 20% SL (21%), disc broadly oblong and flat, reaching beyond anus, but not posterior to genital papilla; each pelvic spine flattened to a lobe and joined to frenum, with wide anteriorly-directed pocket; caudal fin truncate with rounded corners.

Color of holotype in preservative (Fig. 11): head and body pale brownish yellow; many brown dots midventrally on caudal peduncle; snout and jaws whitish; fin rays white.

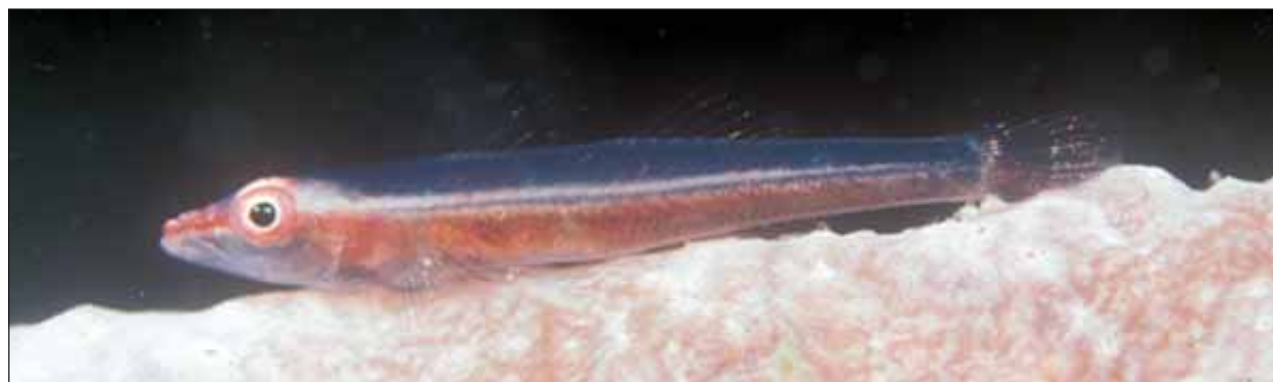
Color of holotype in life (Fig. 12): translucent, except for a broad reddish stripe on ventral half of body, narrowly bordered above by



**Fig. 11.** Holotype of *Bryaninops translucens* n. sp., BPBM 37642, male, 22.8 mm SL, Indonesia, Mentawai Islands, Siberut Island, Sarabua Bay. Photo by T. Suzuki.

**Table V.** Counts and measurements for *Bryaninops translucens*.

Cat. No.	BPBM 37642		BPBM 41117	
Type	Holotype		Paratypes	
Sex	Male		Female	
First dorsal fin	VI		VI	
Second dorsal fin	I, 8		I, 8	
Anal fin	I, 8		I, 8	
Pectoral fin	15		14	
Pelvic fin	I, 5		I, 5	
Segmented rays of caudal fin	9+8		9+8	
Branched rays of caudal fin	6+5		6+5	
Longitudinal scales series	49		46	
Transverse scales rows backward	11		9	
	mm	% in SL	mm	% in SL
Standard length	22,8		16,9	
Head length	6,7	30%	5,1	%
Head depth	3,0	13%	2,3	13%
Head width	3,7	16%	2,7	16%
Body depth at anus	2,9	13%	2,2	13%
Caudal-peduncle length	5,4	24%	3,9	23%
Caudal-peduncle depth	1,8	8%	1,3	8%
Pectoral fin length	4,3	19%	3,3	20%
Pelvic fin length	4,6	20%	3,6	21%
Caudal fin length	4,0	18%	3,6	21%
Snout length	2,1	9%	1,5	9%
Eye diameter	1,7	8%	1,5	9%
Upper jaw length	2,9	13%	2,1	12%
Fleshy interorbital width	0,7	3%	0,5	3%
	% in HL		% in HL	
Snout length	31%		30%	
Eye diameter	25%		30%	
Upper jaw length	44%		41%	
Fleshy interorbital width	10%		9%	

**Fig. 12.** Holotype of *Bryaninops translucens* n. sp., BPBM 37642, Indonesia, Mentawai Islands, Siberut Island, Sarabua Bay. Photo by J. E. Randall.

brassy yellow and below by pinkish white, continuing anteriorly to eye, and posteriorly onto basal part of caudal fin; a narrow red stripe bordered above by pink and below by pale yellow, from upper lip to eye; cranium whitish with a narrow whitish band dorsally on vertebral column; eye light red with a rim of pale yellow around the deep green pupil; fins translucent with whitish rays.

**Distribution:** Presently known only from the Mentawai Islands, SW of Sumatra, but can be expected from at least other islands of Indonesia.

**Etymology:** This species is named *translucens* in reference to the dominant coloration.

**Remarks:** *Bryaninops translucens* is very similar to *B. dianneae* Larson and *B. spongicolus* Suzuki, Bogorodsky & Randall, with which it shares an oblong and very flat pelvic disc, instead of rounded and cup-like as in most other species of the genus. It also differs from these two species in having: ctenoid scales on nape reaching forward to above posterior part of opercle (vs. no scales on nape in the other species), a wide anteriorly-directed pocket on pelvic frenum (vs. absent), head length 30% SL (vs. 35-36% in *B. dianneae*, and 27% in *B. spongicolus*); and long upper jaw, extending posterior to a vertical at anterior edge of pupil (vs. before anterior edge of pupil). In addition, *B. translucens* differs from *B. spongicolus* in having the snout length 30-31% HL and the interorbital width 9-10% HL (vs. 41%, and 16% in *B. spongicolus*).

**Comparative material:** *Bryaninops dianneae*, BPBM 38983, 7 specimens, 14-24 mm SL, Fiji, 15 March 2002; *B. spongicolus*, BPBM 41004, holotype, male, 24.5 mm SL, Red Sea, Sudan, Wingate Reef, 14 October 2009.

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