

A new species of damselfish (Pomacentridae: *Chrysiptera*) from western New Guinea and the Togeian Islands, Indonesia

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Received: 30 July 2007 – Accepted: 05 December 2007

Abstract

Chrysiptera giti is described from nine specimens, 23.4–36.0 mm SL, from the Fak Fak Peninsula of western New Guinea (Papua Barat Province, Indonesia). Underwater photographs also reveal its presence at the Togeian Islands off northeastern Sulawesi. A separate genetic study currently in progress indicates it belongs to a monophyletic clade of four species that includes *C. hemicyanea* (southern Sulawesi, Kei Islands, and western New Guinea), *C. parasema* (western Indonesia, Sabah, and the Philippines), and an undescribed species (*Chrysiptera* species B from northern New Guinea and north Sulawesi). The members of this group are characterised by a brilliant blue coloration with variable amounts of yellow on the posterior/ventral portion of the body. It most closely resembles *C. hemicyanea*. Both species have the posterior portion of the body abruptly yellow behind an oblique line extending forward from the upper caudal-fin base. The yellow coloration extends forward to the anal fin origin in *C. giti*, but in *C. hemicyanea* it also embraces the breast and lower one-fourth of the body. A key to the 10 members of the “*hemicyanea* complex” of *Chrysiptera* species is provided as well as comparative underwater photographs of the three species most closely related to *C. giti*.

Zusammenfassung

Beschrieben wird *Chrysiptera giti* anhand von neun Exemplaren mit 23,4–36,0 mm SL, die von der Nähe der Fak-Fak-Halbinsel des westlichen Neuguinea (Provinz Papua Barat, Indonesien) stammen. Unterwasserfotografien belegen außerdem ihr Vorkommen an den Togeian-Inseln nordöstlich von Sulawesi. Nach einer genetischen Studie, die an anderer Stelle in Arbeit ist, gehört diese neue Art zu einer monophyletischen Klade von vier Arten, zu denen weiterhin *C. hemicyanea* (Süd-Sulawesi, Kei-Inseln und West-Neuguinea), *C. parasema* (West-Indonesien, Sabah, und Philippinen) sowie eine unbeschriebene Art (*Chrysiptera* species B von Nord-Neuguinea und Nord-Sulawesi) gehören. Kennzeichen der Vertreter dieser Gruppe sind eine leuchtend blaue Farbe mit unterschiedlichen Gelb-Anteilen im hinteren/bauchseitigen Teil des Körpers. Die neue Art ähnelt am stärksten

C. hemicyanea. Bei diesen beiden Arten beginnt der gelbe hintere Teil des Körpers abrupt hinter einer schrägen Linie, die sich von der oberen Schwanzflossenbasis nach unten/vorne erstreckt. Bei *C. giti* erstreckt sich die gelbe Farbe nach vorne zu bis zum Ursprung der Afterflosse, während sie bei *C. hemicyanea* auch die Brust und das untere Viertel des Rumpfes umfasst. Abschließend werden ein Bestimmungsschlüssel für die zehn Angehörigen des „*hemicyanea*-Komplexes“ von *Chrysiptera* und vergleichende Unterwasserfotos der drei Arten, die am meisten *C. giti* ähneln, zur Verfügung gestellt.

Résumé

Chrysiptera giti est décrit sur base de neuf spécimens, de 23,4–36,0 mm de LT, originaires de la péninsule Fak Fak de Nouvelle-Guinée occidentale (province de Papua Barat, Indonésie). Des photographies sous-marines révèlent aussi sa présence près des îles Togian, au large du nord-est de Sulawesi. Une étude génétique propre, actuellement en cours, indique que l'espèce fait partie d'un clade monophylétique de quatre espèces comprenant *C. hemicyanea* (sud de Sulawesi, îles Kei et Nouvelle-Guinée occidentale), *C. parasema* (ouest de l'Indonésie, Sabah et les Philippines), et une espèce non décrite (*Chrysiptera* species B du nord de la Nouvelle Guinée et du nord de Sulawesi). Les membres de ce groupe se caractérisent par une brillante coloration bleue avec des quantités variables de jaune sur la partie postérieure/abdominale du corps. L'espèce ressemble le plus à *C. hemicyanea*. Les deux espèces ont la partie postérieure du corps abruptement jaune après une ligne oblique qui s'étend en avant de la base du lobe caudal supérieur. La couleur jaune s'étend en avant de la naissance de l'anus chez *C. giti*, mais, chez *C. hemicyanea*, elle s'étend aussi à la poitrine et au quart inférieur du corps. Une clé pour les 10 représentants ou “complexe *hemicyanea*” des espèces de *Chrysiptera* est fourni ainsi que des photos sous-marines, à titre de comparaison, des trois espèces les plus proches de *C. giti*.

Sommario

Chrysiptera giti è descritta sulla base di nove esemplari di 23.4–36.0 mm SL raccolti presso la penisola di Fak Fak

della Nuova Guinea occidentale (provincia di Papua Barat, Indonesia). Fotografie subacquee rivelano la sua presenza anche alle isole Togeian, a nord-est di Sulawesi. Uno studio genetico separato attualmente in corso indica che essa appartiene ad una linea monofiletica comprendente altre tre specie, specificamente: *C. hemicyanea* (Sulawesi meridionale, isole Kei e Nuova Guinea occidentale), *C. parasema* (Indonesia occidentale, Sabah e Filippine) e una specie non ancora descritta (*Chrysiptera* specie B della Nuova Guinea settentrionale e Sulawesi settentrionale). I membri di questo gruppo sono caratterizzati da una tinta brillante di colore blu con quantità variabili di giallo nella regione posteriore/ventrale del corpo. La nuova specie somiglia molto a *C. hemicyanea*. Entrambe hanno la regione posteriore del corpo immediatamente gialla oltre una linea obliqua che parte dalla regione superiore della base della pinna caudale. La colorazione gialla si estende anteriormente fino all'origine della pinna anale in *C. giti*, mentre in *C. hemicyanea* abbraccia il petto e il quarto inferiore del corpo. È fornita una chiave per l'identificazione dei 10 membri del "complesso *hemicyanea*" delle specie del genere *Chrysiptera* insieme a fotografie subacquee delle tre specie più vicine a *C. giti*.

INTRODUCTION

Damselfishes (Pomacentridae) are one of the most speciose and conspicuous of all fish groups associated with tropical and subtropical reefs. The family was reviewed by Allen (1991), who recognized 322 species in 28 genera. Since the publication of this work 37 additional species have been described, raising the global total to 362 species (Eschmeyer 2007). Slightly more than 300 species inhabit the species-rich Indo-west and central Pacific region. Particularly prominent are the genera *Pomacentrus* Lacépède, 1802 (68 species) and *Chromis* Cuvier, 1814 (66 species and approximately 15 undescribed species from deep reefs of the western Pacific). The genus *Chrysiptera* Swainson, 1839 is the third largest assemblage with 30 described species. However, our preliminary genetic evidence indicates the genus is polyphyletic and intrageneric relationships need to be reassessed. *Chrysiptera* was most recently treated by Allen (1987, 1999), Allen & Adrim (1992), Randall (1994), Allen & Rajasuriya (1995), and Allen & Bailey (2002), who described several new taxa and discussed relationships.

The present paper describes a new species of *Chrysiptera* that was photographed by the first author at the Togeian Islands off northeastern Sulawesi, Indonesia in 1997. It was first thought to be a colour variant of *C. parasema* (Fowler, 1918). However, subsequent collections and underwater

observations by us in Indonesia, the Philippines, and at various Melanesian islands revealed consistent colour patterns, indicative of a complex of closely related species. Specimens of the Togeian fish were eventually collected by us during a Conservation International sponsored marine biological survey of the Fak Fak Peninsula, western New Guinea (Papua Barat Province, Indonesia) during April and May 2006. Additional collections and underwater photographs were obtained during a subsequent visit to the Fak Fak region in April 2007. We also collected tissue samples for DNA analysis and are currently involved in a collaborative study of *Chrysiptera* phylogeny with Paul Barber of Boston University. Preliminary results indicate that the new species belongs to a group of 10 species and forms a monophyletic clade with three other species including *C. hemicyanea* (Weber, 1913), *C. parasema* and another undescribed species (*Chrysiptera* species B) from northern New Guinea and north Sulawesi. The full results of our genetic investigation of this species complex will be published in a subsequent paper currently in preparation.

MATERIALS AND METHODS

Lengths of specimens are given as standard length (SL) measured from the anterior end of the upper lip to the base of the caudal fin (posterior edge of hypural plate); head length (HL) is measured from the same anterior point to the posterior edge of the opercle flap; body depth is the maximum depth taken vertically between the belly and base of the dorsal spines; body width is the maximum width just posterior to the gill opening; snout length is measured from the anterior end of the upper lip to the anterior edge of the eye; orbit diameter is the horizontal fleshy diameter, and interorbital width the least fleshy width; upper jaw length is taken from the front of the upper lip to the posterior end of the maxilla; caudal peduncle depth is the least depth, and caudal peduncle length is the horizontal distance between verticals at the rear base of the anal fin and the caudal fin base; lengths of fin spines and rays are measured to their extreme bases (i.e., not from the point where the ray or spine emerges from the basal scaly sheath); caudal fin length is the horizontal length from the posterior edge of the hypural plate to a vertical at the tip of the longest ray; caudal concavity is the horizontal distance between verticals at the tips of the shortest and longest rays; pectoral fin length is the length of

the longest ray; pelvic fin length is measured from the base of the pelvic spine to the filamentous tip of the longest soft ray; pectoral ray counts include the small splint-like, uppermost rudimentary ray; only the tube-bearing anterior lateral-line scales are counted; a separate count is given for the deeply pitted scales occurring in a continuous series midlaterally on the caudal peduncle; the decimal figure "1.5" appearing in the scale row count above the lateral line refers to a complete scale (1) and small truncated scale (0.5) at the base of the dorsal fin; gill raker counts include all rudiments and are presented as separate counts for the upper and lower limbs as well as a combined count; the last fin ray element of the dorsal and anal fins is usually branched near the base and is counted as a single ray.

Counts and proportions for the holotype are followed by the range for paratypes in parentheses. Proportional measurements expressed in thousandths of the SL are provided in Table I. Counts for soft dorsal rays, pectoral rays, total gill rakers on first arch, and tubed lateral-line scales are presented in Table II. Type specimens are deposited at Pusat Penelitian dan Pengembangan Oseanologi, Jakarta, Indonesia (NCIP), National Museum of Natural History, Washington, D.C. (USNM), and the Western Australian Museum, Perth (WAM).

***Chrysiptera giti* n. sp.**
(Figs 1-3; Tables I-III)

Holotype: NCIP 6332, male, 36.0 mm SL, Teluk Sebakor, 3°16'58.36"S 132°44'17.16"E, Fak Fak Peninsula, Papua Barat Province, Indonesia, 6-10 m depth, clove oil and hand net, M. V. Erdmann, 26 April 2007.

Paratypes: NCIP 6333, 3 specimens, 23.4-33.8 mm SL, collected with holotype; USNM 391568, 2 specimens, 32.9-33.4 mm SL, Pulau Tuburuasa, 3°25.367'S, 132°44.224'E, Fak Fak Peninsula, Papua Barat Province, Indonesia, 4-8 m, clove oil and hand net, G. R. Allen, 4 May 2006; WAM P.32810-002, 3 specimens, 27.1-29.6 mm SL collected with USNM paratypes.

Diagnosis: A species of the pomacentrid genus *Chrysiptera* with the following combination of characters: dorsal rays XIII,10 or 11; anal rays II,12; pectoral rays 14 or 15; gill rakers on first branchial arch 6-7 + 15-16, total rakers 22-23; tubed lateral-line scales 13-17; colour in life brilliant blue with yellow caudal-fin base and anal fin, the boundary between the blue and yellow colours extending obliquely from upper caudal-fin base to origin of anal fin.

Description: Dorsal rays XIII,11 (XIII,10-11);



Fig. 1. Underwater photograph of *Chrysiptera giti*, approximately 30.0 mm SL, Fak Fak Peninsula, western New Guinea. Photo by G. R. Allen.

Table I. Proportional measurements of selected type specimens of *Chrysiptera giti* as percentage of the standard length.

Character	Holotype NCIP 6332	Paratype USNM 391568	Paratype USNM 391568	Paratype WAM P.32810	Paratype WAM P.32810	Paratype NCIP 6333
Standard length (mm)	36.0	33.4	32.9	29.6	27.1	23.4
Body depth	48.1	47.3	52.0	48.0	47.2	45.3
Body width	18.9	19.5	18.5	17.6	17.7	15.0
Head length	33.3	33.2	33.4	33.4	33.9	35.5
Snout length	8.9	9.0	8.5	9.8	8.9	8.5
Orbit diameter	12.2	13.2	13.4	13.9	13.3	14.5
Interorbital width	9.2	9.6	9.4	9.5	8.9	9.8
Caudal peduncle depth	14.7	15.0	14.9	15.5	14.8	14.5
Caudal peduncle length	16.1	14.7	14.0	13.5	13.7	13.7
Predorsal length	9.4	9.9	10.0	10.1	11.8	10.3
Preanal length	39.7	39.5	39.8	41.9	42.4	40.2
Prepelvic length	65.8	65.9	66.6	67.2	65.3	69.2
Length dorsal fin base	39.4	41.0	40.4	42.2	40.2	41.5
Length anal fin base	61.1	60.8	59.9	60.8	59.4	59.8
Length pectoral fin	28.1	26.3	26.4	25.0	26.9	24.4
Length pelvic fin	30.0	32.0	30.1	33.1	33.2	30.8
Length pelvic spine	27.5	35.0	32.5	35.1	29.9	36.3
Length 1 st dorsal spine	17.2	19.5	17.3	18.2	18.1	19.7
Length 2 nd dorsal spine	8.3	9.3	8.2	8.8	9.2	9.4
Length 6 th dorsal spine	19.7	19.2	18.8	21.3	20.3	21.4
Length longest dorsal ray	16.1	15.0	14.3	14.2	15.5	14.5
Length 1 st anal spine	22.8	25.4	17.9	27.4	24.7	24.4
Length 2 nd anal spine	10.8	9.0	7.9	8.1	8.5	11.1
Length longest anal ray	21.1	19.8	20.7	19.6	20.3	21.8
Length caudal fin	25.6	26.9	24.0	28.7	29.2	28.2
Caudal concavity	30.3	34.7	32.2	36.1	33.9	33.8

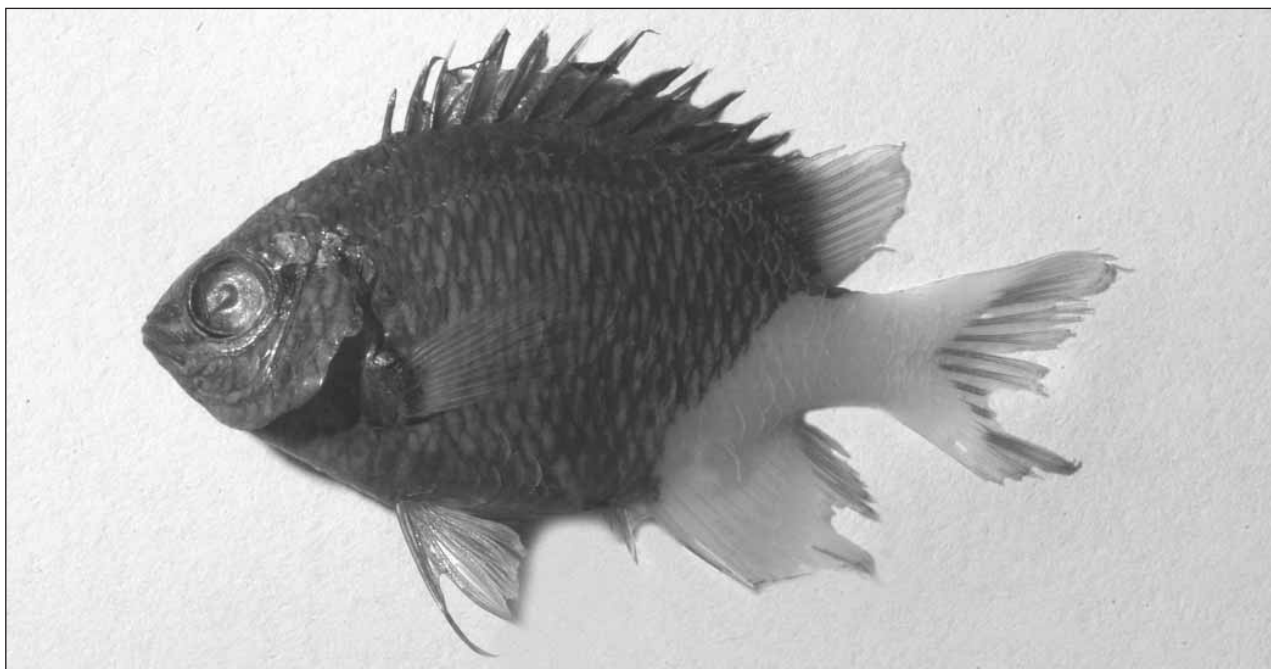


Fig. 2. Holotype of *Chrysiptera giti*, 36.0 mm SL, Fak Fak Peninsula, western New Guinea. Photo by G. R. Allen.

Table II. Summary of soft dorsal rays, pectoral rays, total gill rakers on first arch, and tubed lateral-line scales of *Chrysiptera giti*. Counts for pectoral rays and lateral-line scales were recorded for both sides of each individual.

Dorsal rays		Pectoral rays		Gill rakers	
10	11	14	15	22	23
3	6	4	14	6	2
Lateral-line scales					
12	13	14	15	16	17
1	2	7	4	3	1

anal rays II, 12; pectoral rays 14 or 15; gill rakers on first branchial arch 7 + 15 (6-7 + 15-16), total rakers 22 (22-23); lateral-line scales with tubes 16 (13-17); scales in lateral series from upper rear margin of opercle to base of caudal fin 27 (one paratype with 28); scales above lateral-line to base of middle dorsal spines 1.5; scales below lateral line to anus 9.

Body depth 2.1 (1.9-2.2) in SL; maximum body width 2.5 (2.5-3.0) in depth; HL contained 3.0 (2.8-3.1) in SL; snout 3.8 (3.4-4.2), eye 2.7 (2.3-2.6), interorbital space 3.6 (3.5-4.0), least depth of caudal peduncle 2.3 (2.2-2.4), length of caudal peduncle 2.1 (2.2-2.8), all in HL.

Mouth terminal, oblique, jaws forming an angle of about 25° to horizontal axis of head and body; maxillary reaching to a vertical through anterior edge of eye; teeth of jaws biserial, those of outer row more or less incisiform with flattened tips, upper jaw with about 42 (40-44) teeth and lower jaw with about 44 (42-46) teeth in outer rows, the largest about one-third diameter of pupil in height; a secondary row of slender buttress teeth behind those of outer row in the spaces between them; a single nasal opening on each side of snout; nostril with a low fleshy rim; preorbital and suborbital relatively narrow, the greatest depth about one-third eye diameter, ventral margin smooth; margin of preopercle smooth, without any denticulations; margin of opercular series smooth except a blunt, flattened spine on upper portion near angle.

Scales of head and body finely ctenoid; preorbital, suborbital, snout tip, lips, chin, and isthmus naked; a pair of primary transverse scale rows on cheek with row of smaller scales along lower margin; dorsal and anal fins with a basal scaly sheath; basal half of caudal fin covered by scales; pectoral fins covered by scales only at base; axillary scale cluster between base of pelvic fins about two-thirds length of pelvic spine.

Tubed lateral-line scales ending below posterior

Table III. Comparison of salient colour pattern differences of members of the "hemicyanea complex" of *Chrysiptera* species.

Species	Ground colour	Anal fin colour	Pelvic fin colour
<i>C. cymatilis</i>	blue	blue	blue
<i>C. hemicyanea</i>	blue & yellow	yellow	yellow
<i>C. giti</i>	blue & yellow	yellow	blue
<i>C. oxycephala</i>	pale green	white	white
<i>C. parasema</i>	blue & yellow	blue	blue
<i>C. pricei</i>	blue & white	white	white
<i>C. sinclairi</i>	blue	blue	blue
<i>C. springeri</i>	blue	blue	blue
<i>C. species A</i>	blue	blue	blue
<i>C. species B</i>	blue & yellow	yellow	yellow

spines of dorsal fin; pits or pores present on 4 (2-4) scales immediately posterior to last tubed scale; a continuous series of 9 (7-9) pored or pitted scales mid-laterally on caudal peduncle to caudal base.

Origin of dorsal fin at level of third tubed scale of lateral line; spines of dorsal fin gradually increasing in length to sixth or seventh spine, remaining spines slightly decreasing in length; membrane between spines deeply incised; first dorsal spine 4.0 (3.6-4.7), seventh dorsal spine 1.7 (1.6-1.9), last dorsal spine 2.1 (2.1-3.0), longest soft dorsal ray 1.5 (1.2-1.9), all in HL; length of dorsal fin base 1.6 (1.6-1.7) in SL; first anal spine 3.1 (3.2-4.7), second anal spine 1.6 (1.6-1.8), longest soft anal ray 1.3 (1.2-1.4), all in HL; base of anal fin 2.2 (2.2-2.5) in base of dorsal fin; caudal fin emarginate with rounded lobes, its length 3.3 (2.8-3.5) in SL; pectoral fin reaching a vertical through origin of anal fin, the longest ray 3.3 (3.0-3.3) in SL; filamentous tips of pelvic fins reaching slightly beyond origin of anal fin when undamaged (tips broken off in holotype and most paratypes), the longest ray 3.6 (2.8-3.6) in SL.

Colour in life (Figs 1 and 3): generally brilliant blue with vertical grey streak on each scale, becoming abruptly yellow posterior to an oblique line connecting dorsal edge of caudal-fin base and anal fin origin, including basal half of caudal fin, most of caudal peduncle, and anal fin; a broad black stripe from snout tip to middle of anterior edge of eye and narrower black stripe below from upper lip to lower anterior corner of eye; iris blue with blackish stripe along anterior and ventral margins, also blackish stripe through middle of eye (continuation of upper snout stripe); small (about

one-third pupil size) blackish to dark grey spot on upper opercular edge; spinous portion of dorsal fin brilliant blue; caudal fin yellow basally with translucent outer half; anal fin yellow with blue anterior edge; pelvic fins blue; pectoral fins translucent with small blackish spot at base of uppermost 2-3 rays.

Colour in alcohol (Fig. 2): generally dark bluish grey, abruptly tan to whitish, including caudal and anal fins, posterior to an oblique line connecting dorsal edge of caudal-fin base and anterior origin of anal fin; most scales on dark portion of body with narrow blackish, vertical streak; a broad black stripe from snout tip to middle of anterior edge of eye and narrower black stripe below from upper lip to lower anterior corner of eye (i.e. pair of short black stripes on side of snout to anterior edge of eye); spinous dorsal fin dark bluish grey; soft dorsal fin translucent with dusky grey rays; pelvic fins dusky grey; pectoral fins translucent with a narrow blackish bar across base, darkest at base of uppermost rays.

Remarks: *Chrysiptera* contains at least 30 described species, all from the Indo-west and cen-

tral Pacific region. Allen (1991) characterised the genus (formerly known as *Glyphidodontops* Bleeker, 1877) as small damselfishes, usually with a relatively elongate body (2.1-2.7 in SL for most species), with smooth preopercular and suborbital margins, and biserial dentition in most species. The group, which appears to be polyphyletic, will likely be divided into several genera as a result of a study of genetic relationships currently in progress by the authors and Paul Barber of Boston University. *Chrysiptera giti* belongs to a complex of 10 closely related species from the Indo-Australian Archipelago that contains *C. cymatilis* Allen, 1999, *C. hemicyanea*, *C. oxycephala* (Bleeker, 1877), *C. parasema* (Fowler, 1918), *C. pricei* Allen & Adrim, 1992, *C. sinclairi* (Allen, 1987), *C. springeri* (Allen & Lubbock, 1976), and at least two additional undescribed species. The group is primarily restricted to the area which includes Indonesia, Philippines, New Guinea, and the Solomon Islands, ranging southward to offshore reefs of northwestern Australia and northward to Japan.

The members of the complex have a distinctive shape that is relatively deep-bodied (maximum



Fig. 3. Underwater photographs of closely related species of *Chrysiptera* (30-35 mm SL): *C. giti*, Fak Fak Peninsula, western New Guinea (upper left), *C. hemicyanea*, Raja Ampat Islands, western New Guinea (upper right), *C. parasema*, El Nido, Philippines (lower left), and *C. species B*, Madang, Papua New Guinea (lower right). Photos by G. R. Allen.

depth 1.9-2.2 in SL) for the genus, a deeply incised spinous dorsal fin, and bright coloration largely consisting of blue or a combination of blue and yellow. Colour pattern differences (key to species below and Table II) in combination with gill-raker and dorsal spine counts provide the best means of separation. The new species most closely resembles *C. hemicyanea*, *C. parasema*, and an undescribed species (*Chrysiptera* species B) from New Guinea and northern Sulawesi (see Fig. 3). They are generally allopatric over most of the geographic range (Fig. 4), although *C. hemicyanea* co-occurs with the undescribed species at the Raja Ampat Islands off the extreme western end of New Guinea, and the same undescribed species is sympatric with *C. parasema* at eastern Flores in Indonesia. A study of genetic relationships (Barber et al., in preparation) within *Chrysiptera* reveals that the four species form a monophyletic clade and the new species is most closely related to *C. parasema*.

Key to *Chrysiptera* species in the *hemicyanea* complex

- 1a. Colour pattern mainly brilliant blue in life without yellow or whitish areas..... 2
- 1b. Colour pattern not primarily blue, either a combination of blue and yellow, blue and white, or mainly pale greenish 5
- 2a. Dorsal spines usually 12..... 3
- 2b. Dorsal spines usually 13..... 4
- 3a. Most of scales immediately below dorsal-fin base, and on upper half of caudal peduncle blackish (Philippines and Sabah).....
..... *C. species A*
- 3b. Most of scales immediately below dorsal-fin base, and on upper half of caudal peduncle blue (eastern Indonesia)
..... *C. springeri*
- 4a. Total gill rakers on first arch 22-27 (Bismarck Archipelago and Milne Bay Province of Papua New Guinea and Solomon Is.)
..... *C. cymatilis*
- 4b. Total gill rakers on first arch 31-34 (Bismarck Archipelago of Papua New Guinea)
..... *C. sinclairi*

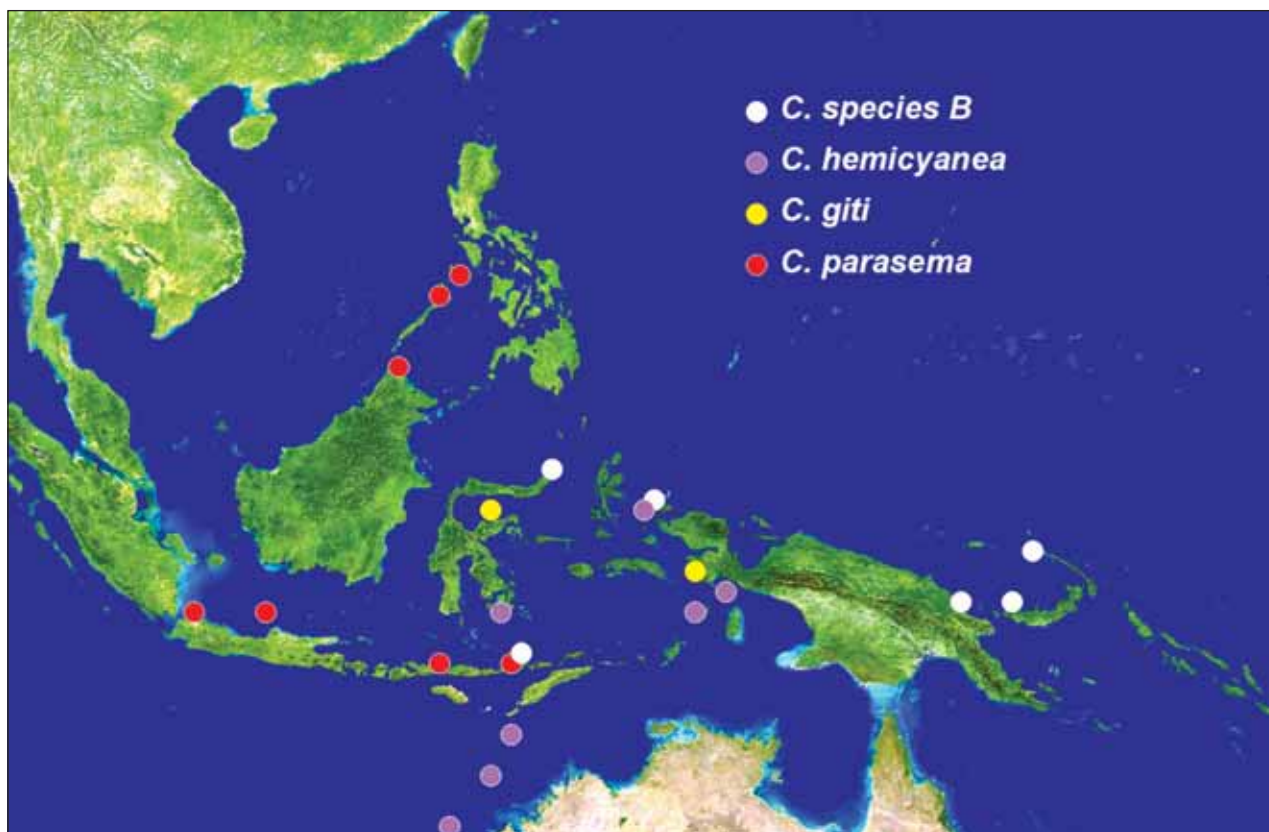


Fig. 4. Map of Indo-Australian Archipelago showing distributional range of *Chrysiptera giti* and other closely related species.

- 5a. Head and body primarily blue with variable amounts of yellow coloration including caudal fin and peduncle **6**
- 5b. Head and body either blue or light green over most of body, grading to white ventrally..... **9**
- 6a. Yellow coloration confined to caudal fin and adjacent peduncle; anal fin entirely bluish (W. Indonesia, Sabah, and Philippines)
..... ***C. parasema***
- 6b. Yellow coloration not confined to caudal fin and adjacent peduncle; anal fin entirely or partly yellow **7**
- 7a. Breast and lower one-fourth of body yellow (offshore reefs of NW Australia, S. Sulawesi, and W. New Guinea, and Kei Is.)
..... ***C. hemicyanea***
- 7b. Breast and lower one-fourth of body blue
..... **8**
- 8a. Pelvic fins yellow, posterior portion of body abruptly yellow behind vertical line extending from last dorsal spines to about anterior fourth of anal fin (N. New Guinea and N. Sulawesi)
..... ***C. species B***
- 8b. Pelvic fins blue, posterior portion of body abruptly yellow behind oblique line extending from upper caudal-fin base to anal fin origin (Fak Fak Peninsula, W. New Guinea and Togeian Islands off northeastern Sulawesi)
..... ***C. giti n. sp.***
- 9a. Head and body blue on dorsal two thirds, white on lower third and most of caudal peduncle (Cenderawasih Bay, W. New Guinea) ***C. pricei***
- 9b. Head and body mainly pale green, grading to white on lower third and most of caudal peduncle, most of body scales with 2-3 vertically aligned small blue spots (Solomon Islands and Palau to E. Indonesia and Philippines) ***C. oxycephala***

Distribution and habitat: *C. giti* is currently known only from two Indonesian locations: the vicinity of Sebakor Bay on the southern coast of the Fak Fak Peninsula of western New Guinea and the Togeian Islands off northeastern Sulawesi (Fig. 4). The habitat consists of sheltered fringing reefs, usually in bays at depths between about 3 to 20 m. It generally occurs in small aggregations and is closely associated with branching formations of live coral, particularly *Acropora* spp. and the pocilloporid *Seriatopora hystrix*. The fish hover a short distance above the substratum, presumably feeding

on zooplankton. It was common at both the Togeian Islands and in Sebakor Bay, but generally replaced by *C. hemicyanea* in other parts of the Fak Fak Peninsula.

Etymology: The new species is named *giti* to honour the request of Enki Tan and Cherie Nursalim, who successfully bid to support the conservation of this species at the Blue Auction in Monaco on 20 September 2007 and have given generously to support Conservation International's Bird's Head Seascape marine conservation initiative. The name is in honour of their family company. It is treated as a noun in apposition.

ACKNOWLEDGEMENTS

We are especially grateful to Conservation International (CI) and the Indonesian Department of Nature Conservation (PHKA) for sponsoring the 2006 expedition and especially to the Walton Family Foundation for their interest and generous support of CI's Bird's Head Seascape marine conservation initiative. We also thank Graham Abbott for assisting with diving activities on both the 2006 and 2007 visits to Triton Bay. The crews of our live-aboard boats, *Citra Pelangi* and *Shakti* provided excellent logistic support during these trips.

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