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MYRIOGRAMME MELANESIENSIS AND M. HETEROSTROMA (DELESSERIACEAE, RHODOPHYTA), TWO NEW SPECIES FROM THE SOLOMON ISLANDS AND VANUATU

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Abstract. Two new species of the red algal genus *Myriogramme*, *M. melanesiensis* and *M. heterostroma*, are described from subtidal habitats in the Solomon Islands and Vanuatu, South Pacific. *Myriogramme melanesiensis* is characterized by a tristromatic thallus with layers composed of subrectangular cells of approximately equal height, smooth margins lacking any spines or proliferations, and multiple ovoid to elongate two-layered, submarginal tetrasporangial sori. *Myriogramme heterostroma* is distinguished by its tri- to pentastromatic thallus, with a single large layer of clear medullary cells and smaller pigmented cortical cells, and tetrasporangia occurring in single, large, median sori.

Previous published records of the marine algal flora of the Solomon and Vanuatu Islands are few and scattered. From the Solomon Islands, the most comprehensive work to date is that of Womersley and Bailey (1970), listing some 233 species. To our knowledge there are no previously published records of the marine algae of Vanuatu, although some seven species were seen by the first author in collections of the Natural History Museum, London (BM); this Vanuatu material is poorly documented and very old. A few anonymous and undated collections of *Halimeda* from Vanuatu are recorded in Hillis-Colinvaux's monograph (Hillis 1959).

The Solomon Islands occupy a total land area of 27,556 km^2 spread over 992 islands aligned over more than 1,500 km in the southwestern Pacific Ocean, encompassing coral reefs amongst those with the highest global biodiversity (Lovell et al. 2004; Payri et al. 2004). Vanuatu is an archipelago of some 93 islands with a total land area of over 14 765 km^2 aligned over 800 km, located 100 km to the southeast of the Solomon Islands. Recent collections from the Solomon Islands and Espiritu Santo, the largest island of Vanuatu, sampled by the third author from June to July 2004 and August 2006, respectively, have yielded many new records from previously unexplored habitats (Payri et al. 2004, unpubl.).

The genus *Myriogramme* was erected by Kylin (1924) and currently comprises some 28 species. In this paper we report two new, locally abundant, subtidal benthic marine species based on collections from the Solomon Islands and Vanuatu.

MATERIALS AND METHODS

Collection and analysis. Material was collected by SCUBA; part was stored in 5% buffered Formalin in seawater, and the rest was dried as herbarium specimens. Dried material was re-hydrated in weak detergent solution prior to sectioning with a freezing microtome. Sections were stained using 1% aniline blue in 60% clear corn syrup, and made permanent if necessary by adding more 60% clear corn syrup and allowing to dry.

Photography. Macrophotographs were taken with a Nikon E-995 digital camera (Nikon Corporation, Tokyo, Japan). Photomicrographs were obtained using an Olympus BH2 compound microscope fitted with an Olympus C-5050 digital camera (Olympus Optical Co. Ltd., Tokyo, Japan), and the resulting files processed into figures by computer software.

Herbarium specimens. Voucher specimens have been deposited in the herbaria of PC, NOU-IRD (Phycological Herbarium, Institut de Recherche pour le Développement, Nouméa, New Caledonia), and MICH. Herbarium abbreviations are in accordance with Holmgren et al. (1990). Accession numbers preceded by the letter 'S' refer to microscope slide collections.

RESULTS

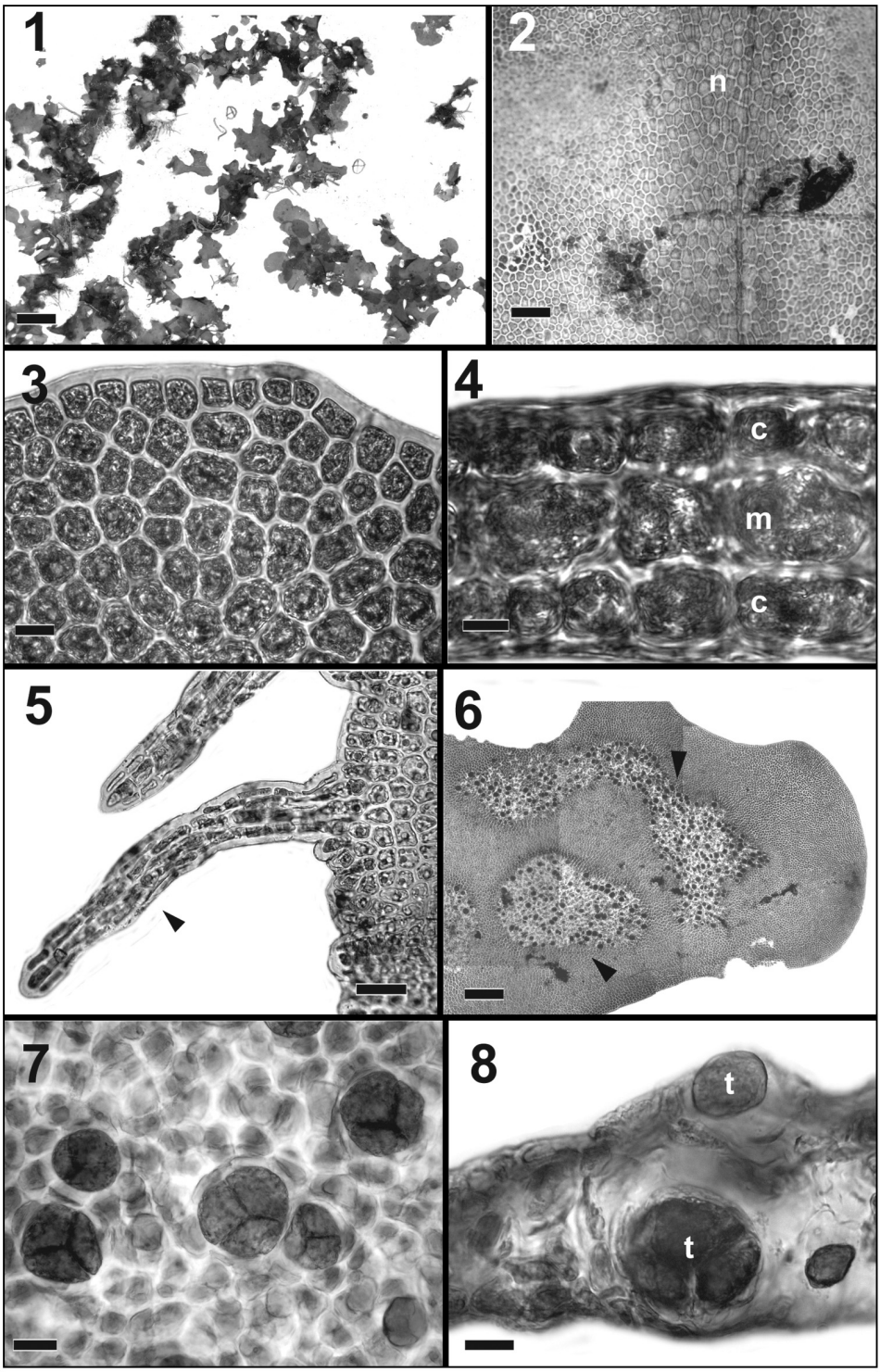
Ceramiales: Delesseriaceae

Myriogramme melanesiensis N'Yeurt, M. J. Wynne & Payri, sp. nov.—Type: Solomon Islands. Nggela Sule, Mbugana Island, 09°11.055'S, 160°11.982'E, –10 m, 11 Jul 2004, *C. E. Payri* (holotype: PC 0062772, tetrasporangial; isotype: NOU-IRD S483, tetrasporangial). Figs. 1–8.

Thallus 5–15 mm altus, roseus, irregulariter lobatus. Laminae 75–80 μm in crassitudine, tristromaticae, stratis cellularum crassitudine circa aequalibus. Cellulae rectangulares-subquadratae in sectione transversali, circa 25 × 50 μm. Margines laminarum laeves ; partes distales clavatae-rotundatae, sine dentibus; partes proximales ligulatae vel irregulariter dichotomae. Rhizoidea marginalia 90–100 μm diametro et 1.0–1.2 mm longa, ex 6–7 filis multicelliaribus fasciculatis constantia, secus peripheriam thalli dispersa. Chloroplasti peripherales et numerosi. Tetrasporangia divisa crucialiter, 60–90 μm diametro, in soris dispersis ovalibus vel elongatis taeniformibusque, monostromaticis vel distromaticis, 0.5–1.0 mm latis et 1.8–4.0 mm longis, in partibus distalibus laminae dispositis.

Thallus 5–15 mm high, pinkish red, irregularly lobed. Blades 75–80 μm thick, tristromatic, with cell layers of approximately equal thickness. Cells rectangular to subquadrate in transverse section, ca. 25 × 50 μm. Margins of blades smooth, distal

FIGS. 1–8. *Myriogramme melanesiensis* (PC 0062772 except where otherwise stated). 1. Habit of holotype; scale = 10 mm. 2. Proximal region of older blade from Vanuatu (*C. E. Payri* (NOU-IRD 1396), showing 'nerve' region (n) [the cross-like runner on the nerve is an epiphytic bryozoan]; scale = 200 μm. 3. Surface view of cortical cells; scale = 50 μm. 4. Transverse section of the thallus, showing the medullary layer (m) of the same height as cortical layers (c); scale = 25 μm. 5. Detail of multicellular marginal rhizoids (arrow); scale = 100 μm. 6. Detail of fertile submarginal region of blade, showing elongate, ribbon-like to ovoid tetrasporangial sori (arrows); scale = 700 μm. 7. Detail of tetrasporangia; scale = 50 μm. 8. Cross section of a two-layered tetrasporangial sorus (t); scale = 50 μm.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portions clavate–rounded, without dentations; proximal portions strap–shaped to irregularly dichotomous. A median 'nerve' region 400–600 µm wide present in proximal areas of some larger, older thalli, consisting of large cells 70–100 µm in diameter. Marginal rhizoids 90–100 µm in diameter, 1.0–1.2 mm long, composed of 6–7 bundled multicellular filaments, scattered along periphery of thallus. Chloroplasts peripheral and numerous. Tetrasporangia cruciately divided, 60–90 µm in diameter, in scattered oval to ribbon-like, elongate 1- to 2-layered sori 0.5–1.0 mm wide, 1.8–4.0 mm long, in distal portions of blade.

Distribution. Solomon Islands and Vanuatu; at depths of 3–35 m on coastal reef slopes, nested amidst branched corals.

PARATYPE. **Solomon Islands.** Makaira, San Cristobal Island, 20 Jul 2004, –12 m, *C. E. Payri* (NOU-IRD S482).

ADDITIONAL SPECIMENS EXAMINED. **Solomon Islands.** Hele Passage, Vangunu Island, 04 Jul 2004, –3 m, *C. E. Payri* (NOU-IRD 478, 477); Kolo Lagoon, New Georgia Island, 8 Jul 2004, –20 m, *C. E. Payri* (NOU-IRD 474, 475; SUVA-A); Nugu Matthews Shoal, Guadalcanal, 10 Jul 2004, –35 m, *C. E. Payri* (NOU-IRD 481); Nggela Island, 12 Jul 2004, –0.8 m, *C. E. Payri* (NOU-IRD 476). **Vanuatu.** Espiritu Santo, 24 Aug 2006, *C. E. Payri* (NOU-IRD 1396, tetrasporic).

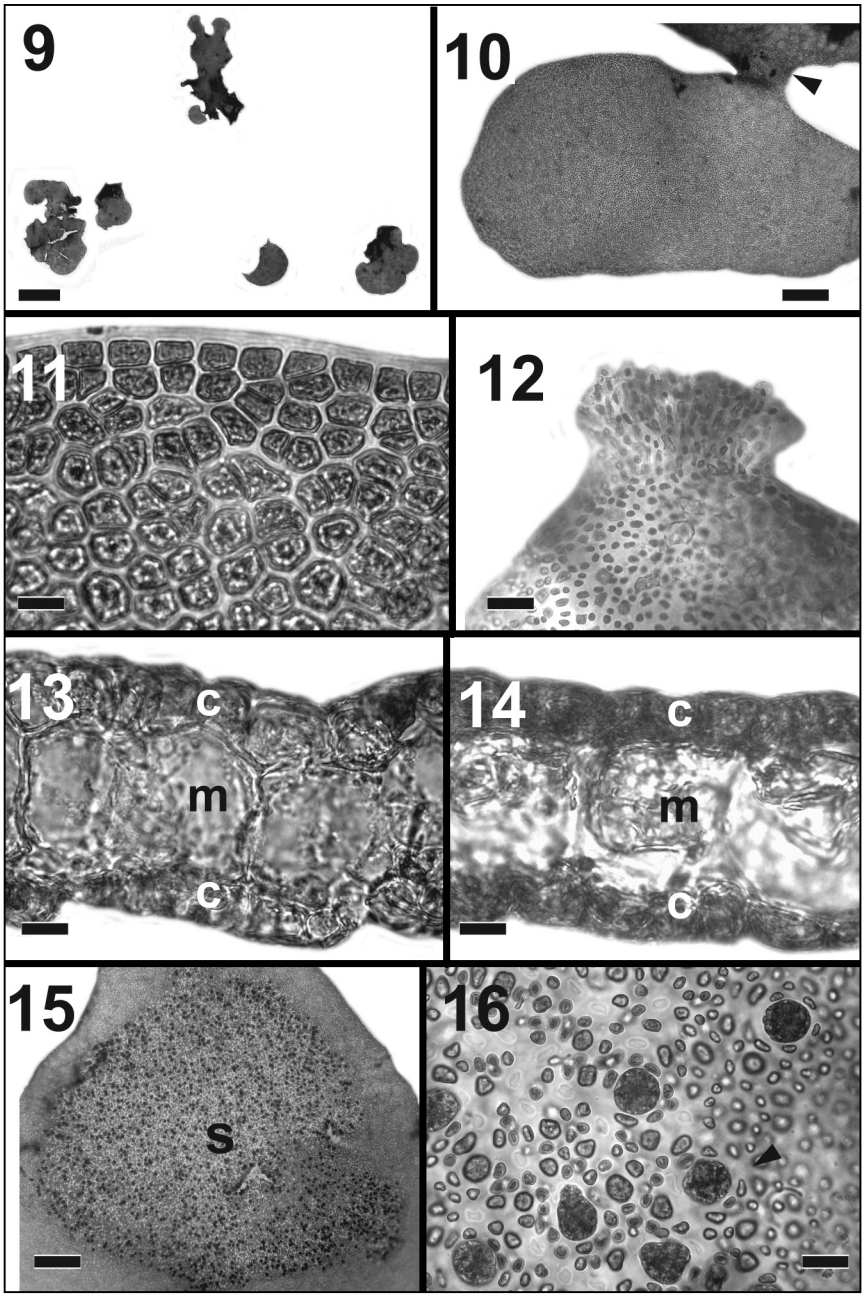
The specific epithet refers to Melanesia, the region where this species has been collected.

Myriogramme heterostroma N'Yeurt, M. J. Wynne & Payri, sp. nov.—TYPE: SOLOMON ISLANDS. Tanavula Point, Nggela Sule, 09°02.804'S, 160°03.711'E, 11 Jul 2004, –10 m, *C. E. Payri* (holotype: PC 0062773, tetrasporangial). Figs 9–16.

Thallus 3–12 mm altus, iridescens, roseus, irregulariter lobatus vel ligulatus anastomosibus frequentibus. Laminae 70–80 µm in crassitudine, ex 3–5 stratis cellularum inaequaliter altis constantes. Stratum medullosum singulare, ex cellulis magnis subquadratis hyalinis constans; cortex ex 1–2 stratis cellularum pigmentiferarum gradatim minorum 5–18 µm diametro constans. Cellulae extimae parvae, subsphaericae, 5–7 µm diametro, dense pigmentiferae. Cellulae corticales interiores sparsae, 7.5–18.0 µm diametro, gangliiformes, numerosis conjunctionibus secundariis instructae. Margines laminarum laeves; partes distales lobatae, sine dentibus. Rhizoidea marginalia nulla; thallus affixus per haptera dispersa lata marginalia. Chloroplasti peripherales et numerosi. Tetrasporangia divisa crucialiter, 18–20 µm diametro, in soris magnis, distromaticis, singularibus, medianis 1500–1800 µm diametro, in partibus distalibus laminae dispositis.

Thallus 3–12 mm high, slightly iridescent pinkish red in color, irregularly lobed to strap-shaped, with frequent anastomoses. Blades 70–80 µm thick, composed of 3–5 cell layers, of unequal height. Medullary layer single, of large subquadrate hyaline cells 40–42 µm in diameter; cortex composed of 1–2 layers of progressively smaller pigmented cells 5–18 µm in diameter. Outermost cells small, subsphaerical, 5–7 µm in diameter, densely pigmented. Inner cortical cells sparse, 7.5–18.0 µm in diameter, ganglionic, with multiple secondary pit connections. Margins of laminas smooth, distal portions lobed, without dentations. Marginal rhizoids absent; attachment via scattered broad marginal haptera. Chloroplasts peripheral and numerous. Tetrasporangia cruciately divided, 18–20 µm in diameter, in large, single, median 2-layered sori 1500–1800 µm in diameter, in distal portions of blade.

Distribution. Solomon Islands; at depths of 6 to 20 m on vertical reef slopes, nested amidst branched coral.



FIGS. 9–16. *Myriogramme heterostroma* (PC 0062773). 9. Habit of holotype; scale = 5 mm. 10. Detail of thallus, showing dense layer of small outer cortical cells and blade anastomosis (arrow); scale = 1 mm. 11. Surface view of cortical cells; scale = 20 μm. 12. Detail of a marginal attachment pad; scale = 20 μm. 13, 14. Transverse sections in two different regions of the thallus, showing a large, clear single medullary layer (m) and a much smaller, pigmented cortical layers (c); scale = 10 μm. 15. Detail of a large median tetrasporangial sorus (s); scale = 200 μm. 16. Detail of tetrasporangia (arrow); scale = 20 μm.

PARATYPE. **Solomon Islands.** Anuta Paina Island, Malaita, 18 Jul 2004, *C. E. Payri* (NOU-IRD S484, tetrasporangial).

ADDITIONAL SPECIMENS EXAMINED. **Solomon Islands.** Rendova Island, New Georgia, –20 m, 5 Jul 2004, *C. E. Payri* (SUVA-A); Honiara, Guadalcanal Island, 9 Jul 2004, –20 m, *C. E. Payri* (NOU-IRD 480).

The specific epithet refers to the different sizes of the cells of the medullary layer and the cortical layers.

DISCUSSION

Probably more than any other genus in the Delesseriaceae, *Myriogramme* has long served as a "catch-all" genus, to which many disparate species have been assigned. As Wynne (1983) stated, the ill-defined circumscription of this genus resulted from Kylin's (1924) basing much of his account of *Myriogramme* on *M. minuta* Kylin, a Mediterranean species, yet designating *M. livida* (J. D. Hook. & Harv.) Kylin, a species from the Falkland Islands, as the type of the genus. Kylin (1924) assigned a total of 18 species to his new genus, and the forms of the thalli expressed in these species show much variation, including very small to large, robust habit, veinless blades to blades with pronounced nerves, and great variability in the position of tetrasporangial sori. Where known, the cystocarps in species of *Myriogramme* were said to produce carposporangia in chains. Wynne (1983) noted that critical examination of the type species is necessary for a proper circumscription of *Myriogramme*. Such a study of *M. livida* was undertaken by Hommersand and Fredericq (1997a), and follow-up publications (Hommersand & Fredericq 1997b; Lin et al. 2001) contributed to elucidating the characters of sometimes similar-appearing genera. In addition, over the years a number of species formerly assigned to *Myriogramme* have been transferred other genera, as the circumscription of *Myriogramme* became more precisely drawn. Such attrition has been carried out by Zinova (1981), who based *Haraldiophyllum* on *Myriogramme bonnemaisonii* Kylin and *Hideophyllum* on *M. yezoensis* Yamada & Tokida (Yamada 1935). Maggs and Hommersand (1993) transferred *M. minuta* and *Haraldiophyllum heterocarpum* [=*Myriogramme versicolor*] to Ernst and Feldmann's (1957) genus *Drachiella*. *Myriogramme erosa* (Harvey) Kylin was transferred to *Haraldiophyllum* by Millar and Huisman (1996). When Lin et al. (2004) erected *Augophyllum*, they included in it *Myriogramme marginifructa* R. E. Norris & M. J. Wynne (1987). Womersley (2003) based his new genus *Nitospinosa* on *Myriogramme pristoidea* (Harv.) Kylin. Despite this ongoing "cleansing" of the genus, there still remain a number of poorly known species assigned to *Myriogramme*.

The tri- to pentastromatic nature of the blades and the rare presence of a basal nerve in specimens of *M. melanesiensis* and *M. heterostroma* are among the features that led us to conclude that these two relatively commonly found algae in the Solomon and Vanuatu Islands belong to undescribed species. We are able to exclude the great majority of species of *Myriogramme* (and some related genera) fairly easily, in particular, those species with blades bearing pronounced nerves throughout their thalli. In *M. melanesiensis*, the presence of a median "nerve" region appears to be a relatively rare feature strongly dependent on age and maturity of the thallus and is more pronounced in proximal areas of some larger plants. The majority of plants in a given population do not show any clear nerves or veins. We have compared the two new species with a group of somewhat similar species in Table 1, where we list important morphological traits.

TABLE 1. Comparison of *Myriogramme melanesiensis*, *M. heterostroma*, and related species.

SPECIES AND REFERENCE	TYPE LOCALITY	HABIT	CELL LAYERS	MARGINS	IRIDESCENCE	TETRASPORANGIAL SORI
M. melanesiensis (this study)	Mbugana Island, Solomon Islands	simple to irregularly lobed blades, to 15 mm tall	3, of equal height	smooth	absent	submarginal, multiple, elongate to ovoid
M. heterostroma (this study)	Nggela Sule, Solomon Islands	simple to irregularly lobed blades, to 12 mm tall	3–5, of unequal height	smooth	slight	median, single, ovoid, large
M. alliacea (P. Crouan & H. Crouan) Athanasiadis, 1996	Rade de Brest, Brittany, France	lobed, divided blade, 30–60 mm tall	3	smooth	absent	apparently 2–layered (Magne 1959)
M. cartilaginea (Harvey) Womersley, 2003	Garden Island, Western Australia	irregularly alternately branched complanate thallus, to 80 mm tall	2–4, usually 3	crispate or with short dentations	absent	scattered
M. distromatica Boudouresque, 1971	Port Mahon, Minorca, Balearic Island	lobed, irregularly divided blade 10–15 mm in diameter	2	smooth	absent	unknown
M. goaensis V. Krishnamurthy & K. Varadarajan, 1990	Calangute, Goa, India	linear, deeply divided blades, 20–30 mm tall	3	occasional teeth, numerous marginal rhizoids	absent	scattered small sori in median region
M. prostrata E.Y. Dawson, Neushul & Wildman) M. J. Wynne, 1990	Islas San Benitos, Baja California, Mexico	lobed blades to 35 mm wide, 25 mm long	1	with small dentations	present	in large scattered sori near blade margins
M. quilonensis Anil Kumar & Panikkar, 1993	Thirumullavaram, Kerala, India	small lobed thallus to 15 mm tall	2	with small dentations	absent	in large sori
M. repens Hollenberg, 1945	Point Vicente, California, USA	simple blade to 8 mm tall	1, 3 in fertile regions	smooth	absent	in small scattered sori
M. variegata Yamada, 1944	Sagami Bay, Japan	thin blade to 15 mm tall, 3–4 mm wide	1	smooth or minutely dentate	absent	in small scattered sori
Nitophyllum tristromaticum Rodriguez ex Mazza, 1903	Port Mahon, Minorca, Balearic Islands	lobed blade to 5 mm wide	3, one large central and two small cortical	smooth	absent	unknown
Drachiella minuta (Kylin) Maggs & Hommersand, 1993	Naples, Italy	lobed, irregularly divided thallus 25–30 (–50) mm tall	1–3	smooth	present	unknown

[1]This species has scattered transversely dividing initials along the margins and likely belongs to *Polyneura*, not *Myriogramme*.

Myriogramme alliacea (P. Crouan & H. Crouan) Athanasiadis, a species occurring on the coast of Brittany, France (Crouan & Crouan 1851), has a distinctive rose-wine color in well-preserved samples. The blades have smooth margins and are tristromatic for almost all of their length. The cells in cross section are of uniform size. Tetrasporangia are arranged in small sori over the central part of the thallus (Magne 1959); however, thalli are taller (3–6 cm) than those in the new species, and they release of the odor of onions when thalli are immersed in fresh water and then emersed, a distinctive feature of *M. alliacea* (Crouan & Crouan 1851).

Another species of *Myriogramme* with a tristromatic organization is *M. goaensis* V. Krishnamurthy & Varadarajan (in Krishnamurthy 1992), described from India. Only tetrasporangiate thalli were described, and the tetrasporangia were said to be in scattered, small sori (Krishnamurthy & Varadarajan 1990), but their Fig. 13 depicts a blade with only a single large sorus. Also, although the thalli were said to be "stipitate, deeply divided into small, sinuate, linear to lanceolate blades," the blades in Fig. 13 appear to be simple. The presence of marginal teethlike projections with transversely dividing apical cells would separate this Indian species from both new species from the Solomon Islands and Vanuatu.

Another species from India is *Myriogramme quiloneensis* Anil Kumar & Panikkar (1993). Thalli are essentially distromatic throughout, and the blade margins bear short spine-like projections as well as tufts of rhizoidal initials for attachment purposes, which distinguished it from the new species.

Myriogramme repens, known from the Pacific coast of North America (Hollenberg 1945) has a rhizome bearing simple blades less than 10 mm in height and with very small, scattered sori of tetrasporangia. These features as well as the monostromatic nature of the blades distinguish it from the new species.

Myriogramme prostrata was originally described as *Haraldia prostrata* from Pacific Mexico (Dawson et al. 1960), but was later reported from the tropical-subtropical western Atlantic (Wynne 1990; Littler & Littler 2000; Ballantine et al. 2004), the South Pacific (Skelton & South 2002; South & Skelton 2003). Littler and Littler (2000) described the blades as exhibiting a "blue-green sheen," thus somewhat iridescent like *M. heterostroma*. *Myriogramme prostrata* was also reported, but with a query, from Kwazulu-Natal, South Africa (De Clerck et al. 2005), but that plant, with a mottled, strongly iridescent aspect and with numerous marginal teeth, seems unlike genuine *M. prostrata*, which is basically a prostrate alga with frequent marginal rhizoids for attachment. A monostromatic, marginally dentate blade arising from a prostrate axis, with marginal rhizoids, and bearing large scattered tetrasporangial sori was reported and illustrated from Fiji in the South Pacific, at first as *Myriogramme* sp. (South et al. 1993) and later as *M. prostrata* (South & Skelton 2003), and also from Samoa (Skelton & South 2002). The occasional small marginal dentations, the monostromatic nature of the blades, as well as the presence of scattered large tetrasporangial sori confined to marginal regions all distinguish *M. prostrata* from the new species.

Myriogramme cartilaginea (Harvey) Womersley is a little-known species occurring in Western Australia (Harvey 1855), but cystocarpic plants have not yet been observed and the assignment to *Myriogramme* uncertain (Womersley 2003). Its thalli are 4–8 cm tall and with abundant irregularly alternate branching, often with crispate margins and a cartilaginous texture. The blades become tristromatic and later become polystromatic in the central regions. These features easily separate it from the new species.

Myriogramme variegata Yamada, with a type locality of Sagami Bay, Japan (Yamada 1944), has also been reported from California (Abbott & Hollenberg 1976). It consists of a discoid base giving rise to stipitate simple, or rarely divided, small blades reaching only 1.5 cm in height. The blades are monostromatic and were said to have margins both entire and minutely dentate. Tetrasporangial sori are small and produced on the leafy parts of the blade (Yamada 1944). The monostromatic nature of the blade and the minute marginal teeth distinguish *M. variegata* from the new species.

Myriogramme distromatica Boudouresque was based on material in the Thuret-Bornet Herbarium in Paris bearing the manuscript name "*Nitophyllum distromaticum* Rodriguez." The type was a Rodriguez collection of May, 1897, from a submarine cave at a depth of 90 m off Port Mahon, Minorca, Balearic Islands, in the western Mediterranean. This species has also been reported from deep waters off the coast of North Carolina and South Carolina (Schneider & Searles 1991). The small (to 15 mm across) prostrate blades are consistently distromatic, with the ventral layer of cells larger than those of the surface layer. Multicellular rhizoids are frequent on the undersurface and attach the blade to the substratum. Reproduction is not known in this species. The single parietal fenestrate chloroplast per cell clearly indicates that this species does not belong to *Myriogramme* (Hommersand & Fredericq 1997a).

Nitophyllum tristromaticum Rodriguez ex Mazza (Mazza 1903) bears discussion in that Boudouresque et al. (1984) intended to transfer it to *Myriogramme*, but their combination was not validly published (Greuter et al. 2000). This Mediterranean species, described from Minorca, Balearic Islands (Mazza 1903), has a tristromatic organization, and there is a central layer of relatively large cells and cortical layers of smaller cells, as occurs in *M. heterostroma*. According to Gómez Garreta et al. (2001), the cells bear a single parietal, platelike chloroplast per cell, a feature that precludes placing this species within either *Nitophyllum* or *Myriogramme*.

Schizoseris bombayensis (Børgesen) Womersley is another small Delesseriacean species with a wide range in tropical and warm temperate waters of the Pacific Ocean, including the South Pacific (Millar & Kraft 1993; Abbott 1999; Littler & Littler 2003; Lobban & N'Yeurt 2006). The blades in this species are usually 1–2 (–5) cm high, irregularly to dichotomously branched, with median macroscopic nerves usually coursing from the base to distal regions of the thallus (Abbott 1999; Womersley 2003). The blades are monostromatic in most regions of the thallus between the nerves (Børgesen 1931; Segawa 1941, as *Myriogramme subdichotoma*; Dawson 1950, as *S. pygmaea*) but may become distromatic in older regions (Børgesen 1931). The chloroplasts have been shown to be dissected and ribbon-like (Lobban & N'Yeurt 2006), and the species has never been reported as iridescent. These differences distinguish this species from the new species of *Myriogramme*.

Another Delesseriacean alga with superficial resemblance to *Myriogramme melanesiensis* and *M. heterostroma* is *Drachiella minuta* (Kylin) Maggs & Hommersand. Based on a collection from the vicinity of Naples, Italy (Kylin 1924), this species was described as non-stipitate small blades, 1–2 cm tall, irregularly sinuate or lobed, distally monostromatic, but tristromatic below, and lacking veins. Tetrasporangial sori are small and scattered in the distal portions of the blades, and the tetrasporangia are produced in two layers. Magne (1956, 1957) provided detailed observations on the distinctive cellular organization of this species and its distinctive process of many chloroplasts undergoing a fusion process to form a single lobed chloroplast. Maggs and Hommersand (1993) described specimens to be of rare occurrence in southwestern England

and the Channel Islands, where they form thalli 5 cm high and 5 cm wide. The thalli become decumbent and at times show a strong blue iridescence. The blade in cross section shows the cell layers to be of uniform size. Tetrasporangia are produced in sori directly on the primary blade in this species, quite unlike the production of small specialized tetrasporophylls in *Drachiella spectabilis* Ernst & Feldmann (1957), the type of the genus *Drachiella*. This led Wynne (1994) to express doubt of the placement of *M. minuta* in *Drachiella*. It seems that the primary justification for the proposed transfer by Maggs and Hommersand (1993) is the presence, as in *D. spectabilis*, of one large ribbon-like to convoluted chloroplast per cell rather than many small discoid chloroplasts per cell. This caution led Gómez Garreta et al. (2001) to retain *M. minuta* in *Myriogramme*. This species is differs from both new species in its different cellular organization.

Myriogramme melanesiensis and *M. heterostroma* increase our knowledge of algal diversity in this region of the world, and enrich the Delesseriaceae from the Solomon Islands, for which Womersley and Bailey (1970) had not reported the genus *Myriogramme* among the six taxa listed for this family.

Key to the Species of Myriogramme from the Solomon Islands and Vanuatu

1. Medullary layer of approximately same dimensions as cortical layers; attachment via marginal rhizoids; tetrasporangia in multiple irregular marginal sori. *M. melanesiensis*
1. Medullary layer much larger than cortical layers; attachment via marginal haptera; tetrasporangia in large, single median sori. *M. heterostroma*

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