

## 东海马尾藻属一新种——黑叶马尾藻\*

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### 提 要

本文报道产自我国浙江省南麂岛的一个新种马尾藻——黑叶马尾藻 *Sargassum nigrifoloides* sp. nov., 其特征为固着器呈圆锥形或亚圆锥形; 主干1—2回叉状分枝; 主枝扁平, 具有反曲藻叶, 黑褐色; 基部藻叶披针形, 边缘全缘, 上部藻叶长披针形或线形, 边缘多数全缘, 有时有少量浅齿或波状缺刻, 没有毛窝; 气囊椭圆形; 雌雄异株, 雌托宽匙形或倒卵形, 边缘光滑, 顶端具有波状齿, 雄托长匙形, 边缘光滑, 顶端具有凹口。

马尾藻是我国常见的经济海藻, 弄清这类海藻的种类、资源及其分布具有现实意义。全世界已报道的马尾藻约有400余种, 广泛分布于热带和温带水域, 特别是印度-西太平洋海域和澳大利亚沿岸。美国著名藻类学家 Setchell (1933) 把生殖托扁平或扁压, 匙形或倒披针形, 具有圆锥状或总状排列的, 属于反曲叶组 (Section *Halochloa*) 的一类马尾藻都归纳为一个变异很大的种类, 即裂叶马尾藻 *S. siliquastrum* (Turn.) Ag. 我们在研究中国马尾藻属的过程中, 根据他的概念, 将一些产自我国浙江省南麂岛的马尾藻标本暂定为这个种。最近, 吉田忠生 (T. Yoshida, 1983) 对东亚特有的裂叶马尾藻这个种群进行了较为细致的研究, 把它划分为6个种, 我们根据多年的经验, 同意吉田忠生的论点, 对产于南麂岛的属于裂叶马尾藻种群的这种海藻进行重新研究, 明确了这是不同于日本已报道的种的新种, 命名为黑叶马尾藻 *S. nigrifoloides* sp. nov., 新种的模式标本存中国科学院海洋研究所植物标本室。

**黑叶马尾藻(新种) *Sargassum nigrifoloides* sp. nov.** (图版 I; 图 1—2)

Frons mediocris, ad 50 cm alt., hapteron subconicum vel conicum; caule brevisimo, cylindrico, semel vel bis dichotomo; ramis primariis compressis, laeve, foliis prope partem basalem retroflexis, lanceolatis, costis, ad 5—6 cm longis, 1—1.5 cm latis, marginibus integris vel leviter serrulatis fuscis, costis evanescentibus eglandulosis, foliis superis anguste lanceolatis vel linearibus 0.2—0.5 cm latis, 2—3 cm longis, marginibus integris vel aliquantum undulatis vel leviter serrulatis; vesiculis illipsoideis, ca. 4 × 6 mm apiculatis stipitatis, eglandulosis. Planta dioica; receptaculis foemineis complanatis, spatulatis vel obovatis, marginibus laevibus,

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late crenulatis ad apicibus, 4—5 mm latis, 5—6 mm longis; receptaculis masculinis complanatis, linearibus spatulatis, laevibus ad marginem, apicis plerumque emarginatis, 3—5 mm latis, 6—10 mm longis.

**Holotypus** AST 634496♂, ad Nanjidao, Zhejiang, in Mari Sinensi orientali, 6 VI, 1963.

藻体黑褐色,中等大小,高达50cm。固着器圆锥形或亚圆锥形,主干较短,圆柱形,高2—3cm,具有1—2回叉状分枝,(图1:c),主枝从分枝的主干顶端长出,扁平,宽2—3mm,明显地扭转,局部呈不规则棱形,边缘光滑,无齿状突起。侧枝从主枝的叶腋间长出,形状和主枝相似,但比主枝短,上生气囊、藻叶和生殖托。藻体基部藻叶明显地反曲,披针形,边缘全缘,长5—6cm,宽1—1.5cm,黑褐色,革质,比较厚,顶端钝圆,基部楔形,具有2—3mm长的短柄;上部藻叶比较小,通常为长披针形或线形,长2—3cm,宽0.2—0.5cm,大多数边缘全缘,少数为波状或具浅锯齿;藻叶都具有中肋,大多数贯顶,没有毛窝;气囊椭圆形或卵形,长约6mm,宽4mm,顶端冠以细尖或丝状小叶,表面光滑,没有毛窝,基部具有短柄,长1—2mm。本种雌雄异体;雌托扁平,倒卵形或宽匙形,边缘光滑,顶端具有不规则的波状齿,长约为5—6mm,宽4—5mm,基部具有短柄;雄托扁平,多数为长匙形,长6—10mm,宽3—5mm,表面光滑,顶端具有凹口。生殖托大多数单生,少数由2—3个组成简单托聚,着生在小枝的叶腋间,整个生殖托小枝构成圆锥形的托聚。生殖托5月下旬开始出现,6月以后成熟。

**模式标本** AST 634496, 雄植物体, 1963年7月6日采自浙江省南麂岛尤泉礁, 生长在低潮带附近的岩石上和石沼中(采集者郑树栋和徐法礼)。等模式标本 H72398, 雌植物体, 1972年6月11日采自南麂岛(采集者杭金欣)。

**主要特征** (1) 主枝扁平扭曲, 边缘光滑, 具有明显向后反曲的藻叶; (2) 藻叶黑褐色, 较厚, 革质; 基部藻叶披针形, 边缘全缘, 上部藻叶较小, 长披针形或线形, 大多数

表 1 两种马尾藻比较

特 性		种 名	黑叶马尾藻(新种) <i>S. nigrifoloides</i> sp. nov.	裂叶马尾藻 <i>S. siliquastrum</i> (Turn.) Agardh
藻 叶	基部藻叶	形状	披针形	椭圆形或披针形
		大小	长5—6cm, 宽1—1.5cm	长3—4cm, 宽1—1.5cm
		边缘	全缘	全缘
	上部藻叶	形状	长披针形或线形	长披针形
		大小	长2—3cm, 宽0.2—0.5cm	长8—10cm, 宽1—1.5cm
		边缘	一般全缘, 有时具有少量浅齿或波状缺刻	边缘具有明显的锯齿或双锯齿, 深裂到中肋
毛 窝		无		少量
气 囊		较小, 椭圆形, 4 × 6cm		较大, 倒卵形或椭圆形, 10 × 8mm
生 殖 托	雌托	宽匙形或倒卵形, 顶端具有波状齿(长5—6mm, 宽4—5mm)		匙形, 个别棱形, 顶端光滑(长5—10mm, 宽2—4mm)
	雄托	长匙形(长6—10mm, 宽3—5mm) 顶端具有凹口		长匙形(长15—17mm, 宽1.5—2mm) 顶端没有凹口

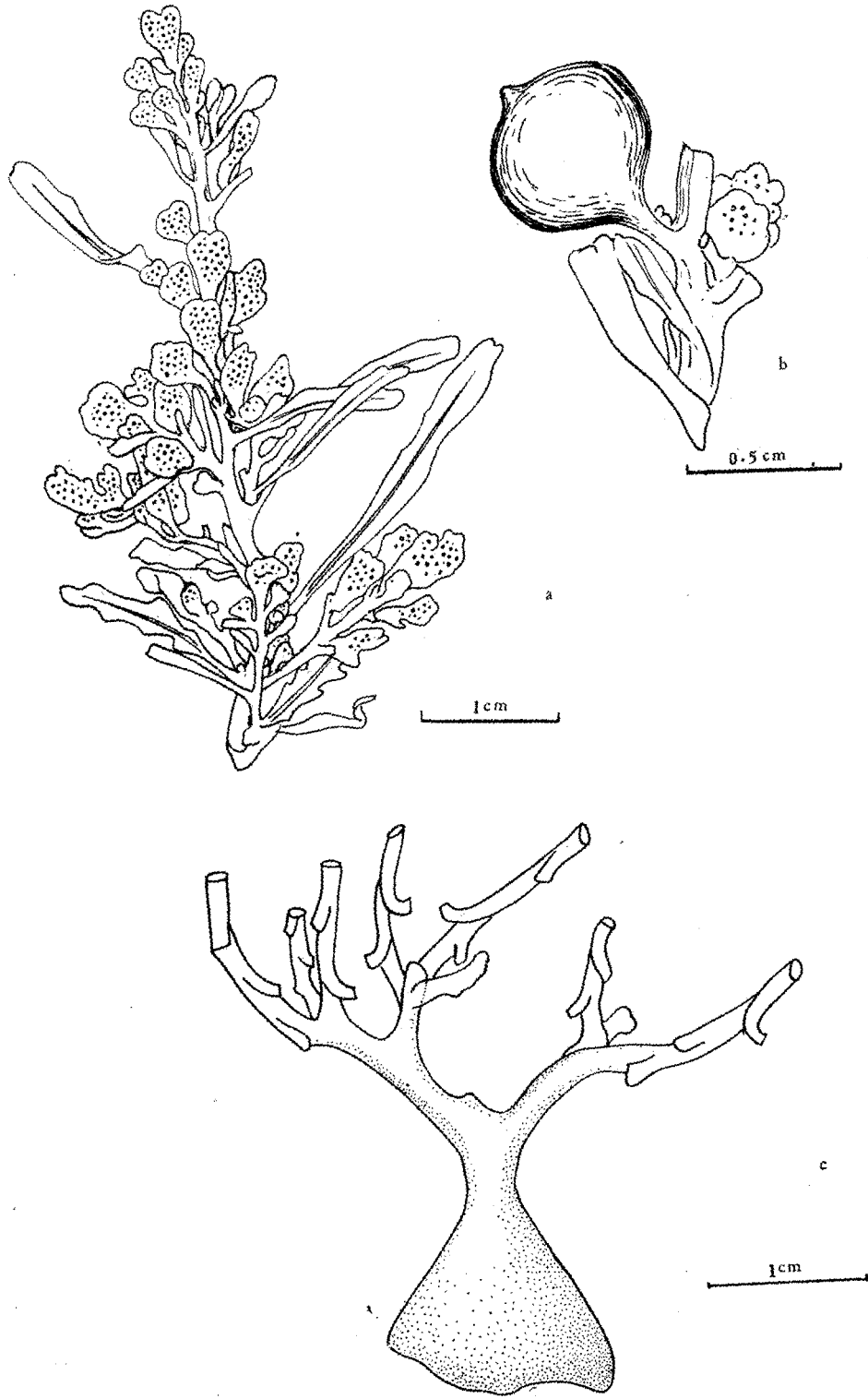


图 1

a. 雌生殖托小枝, 示藻叶和生殖托 b. 气囊 c. 固着器



图 2

a. 雄生殖托小枝, 示生殖托, 藻叶和气囊 b. 主枝下部藻叶

边缘全缘, 少数边缘为波状或具浅锯齿, 具有中肋, 没有毛窝; (3) 生殖托扁, 边缘光滑, 圆锥状排列, 雌托倒卵形或宽匙形, 顶端具有不规则的波状锯齿, 雄托长匙形, 顶端具有凹口。

黑叶马尾藻在南麂岛及其附近小岛很常见, 根据其固着器、藻叶和生殖器官的特征, 属于反曲叶亚属 *Bactrophyucus* J. Agardh, 反曲叶组 *Halochloa* (Kuetz.) Yoshida。它的近缘种是裂叶马尾藻 *Sargassum siliquastrum* (Turn.) Agardh 它们之间的不同见表 1。

从表 1 看出黑叶马尾藻的基部叶比上部叶大, 边缘一般全缘, 少数具有浅齿或波状缺刻, 没有毛窝, 而裂叶马尾藻基部叶比上部叶小, 上部叶边缘具有明的锯齿或双锯齿, 深裂到中肋; 具少量毛窝; 前者气囊小, 雌生殖托顶端具有波状齿, 雄托顶端具有凹口, 而后者气囊较大, 雌、雄生殖托顶端光滑。因此, 它们之间很容易区分。

## 参 考 文 献

- [ 1 ] Agardh, J., 1889. Species Sargassorum australiae. Kgl. Sv. Vet. Akad. Handl. 23(3): 1—133, 31 pls.
- [ 2 ] Setchell, W. A., 1933. Hong Kong seaweeds, III. Hong Kong Naturalist Suppl. 2: 33—49.
- [ 3 ] Yendo, K., 1907. The Fucaceae of Japan. J. Coll. Sci. Tokyo Imp. Univ. 21(12): 1—174.
- [ 4 ] Yoshida, T., 1983. Japanese species of *Sargassum* subgenus *Bactrophyucus* (Phaeophyta, Fucales). *Journal of the Faculty of Science, Hokkaido University Series V (Botany)* 13(2): 99—246.

## ON A NEW *SARGASSUM* FROM THE EAST CHINA SEA—*S. NIGRIFOLOIDES* SP. NOV.\*

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### ABSTRACT

In our studies on Chinese *Sargassum*, we have for many years tentatively identified some specimens collected from Nanji Island, Zhejiang Province, East China Sea, with *Sargassum siliquastrum* (Turn.) Ag. *sensus* Setchell (1933). In Yoshida's recent monograph on Japanese *Sargassum* (1983), the *S. siliquastrum* complex was split into six species, instead of grouping all these under *S. siliquastrum* as Setchell did. We agree with Yoshida in his treatment of the *S. siliquastrum* complex. Our recent study on the Nanji specimens has convinced us that they belong to an undescribed species differing from *S. siliquastrum*, *S. serratifolium* and the other known species of the *S. siliquastrum* complex and hence the new name *S. nigrifoloides* is given. The type specimens of the new species are deposited in the Herbarium of the Institute of Oceanology, Academia Sinica, Qingdao.

*Sargassum nigrifoloides* Tseng et Lu sp. nov.<sup>1)</sup>

Frond of median size, to about 50 cm high, arising from a subconical to conical holdfast; axis short, terete, dichotomously branched once or twice, 2—3 cm high; main branches arising from the distal part of the axis, compressed, 2—3 mm wide with smooth margin; leaves with percurrent costa, distinct or evanescent, dark brown, coriaceous in texture, without cryptostoma; retroflexed lower leaves lanceolate with entire margin, to 1—1.5 cm broad, 5—6 cm long, and upper leaves narrow lanceolate, to linear, 0.2—0.5 cm broad, 2—3 cm long, most of them with entire or somewhat undulate or slightly serrulate margin, vesicles ellipsoidal or obovate about 4×6 mm, apiculate, stipitate. Plant dioecious, receptacles complanate, spatulate or obovate, usually solitary or in short racemes of two or three, in axils of leaves, the whole inflorescence forming a panicle; male receptacles 3—5 mm broad, 6—10 mm long, notched at apices and female ones 4—5 mm broad, 5—6 mm long, broadly crenulate at apices. Maturation in late Summer to Autumn.

**Habitat** Growing on rocks and pools from the lower intertidal to the subtidal zones 1 m deep, Nanji Island, Zhejiang Province on July 6, 1963, collected by Zheng Shudong and Xu Fali (AST 634496, Holotype). and on June 11, 1972, collected by Hang Jinxin (H72398, Isotype).

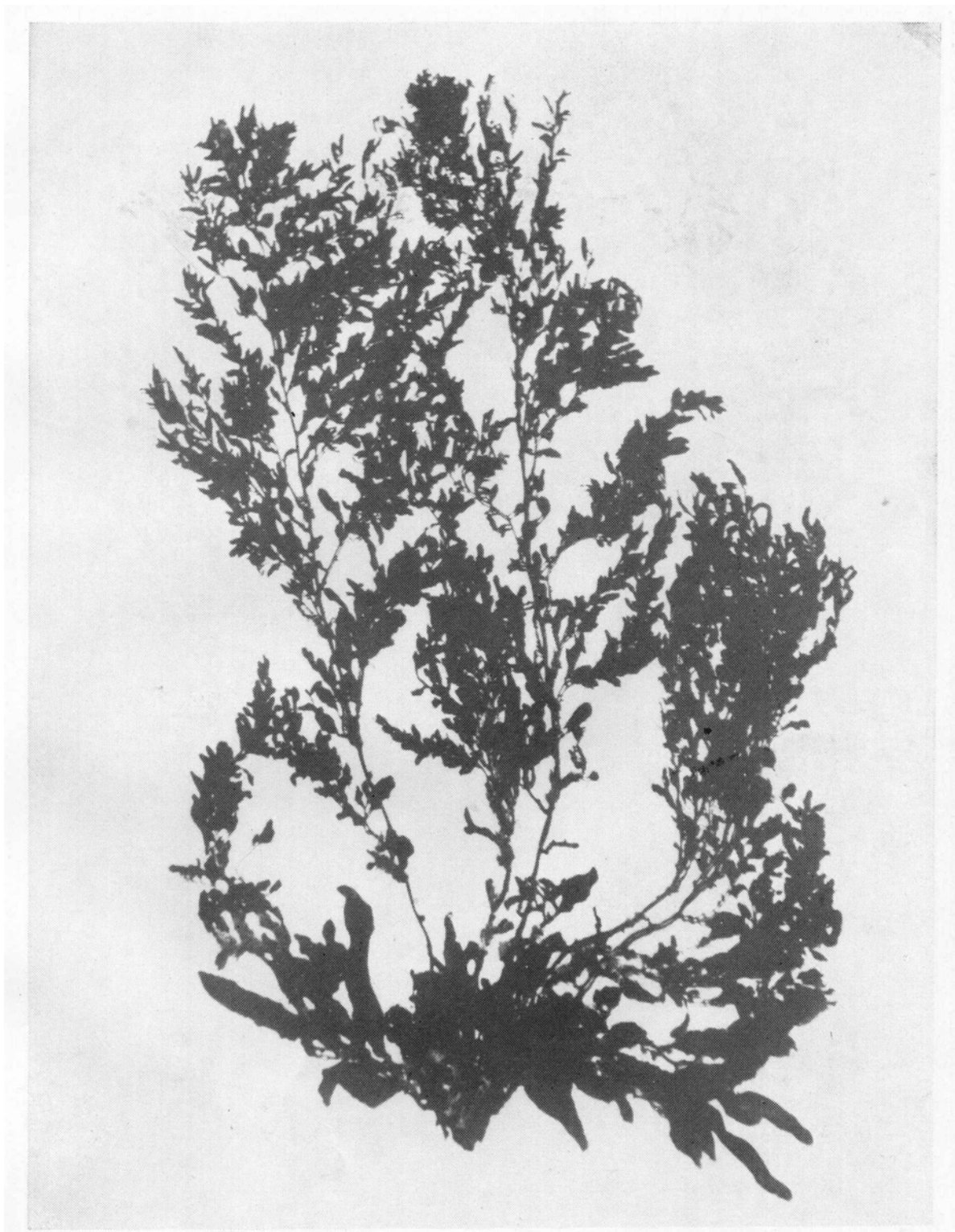
The new species is a member of the *Holochloa* section of the subgenus *Bactrophyucus* and is the most closely related to *S. siliquastrum* (Turn.) C. Ag., but it differs from *S. Siliquastrum* (Turn.) C. Ag. in its smaller leaves, its leaves without cryptostomata, lo-

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1) For the Latin diagnosis, please see pp. 169—170.

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wer leaves larger than the upper ones with entire or somewhat undulate or slightly serrulate margin; its smaller vesicles; its female receptacles broadly spatulate or obovate, broadly crenulate at apices, and male ones narrow spatulate notched at apices; whereas in *S. siliquastrum* lower leaves are smaller than the upper ones, with conspicuous serrations or double ones, deeply reaching to the midrib at margin, with a few cryptostomata; vesicles larger; female or male receptacles smooth at apices, so they are easy distinguished each other.



黑叶马尾藻(新种) *Sargassum nigrifoloides* sp. nov. 模式标本(♂)外形