

Ardiani Ika Pratiwi, 2018, Studi Taksonomi *Phyllophorus dobsoni* di Perairan Pantai Timur Surabaya Berdasarkan Karakter Morfologi dan Genetika Molekuler, Skripsi ini di bawah bimbingan Prof. Dr. Bambang Irawan, M.Sc. dan M. Hilman Fu'adil Amin, S.Si., M.Si., Departemen Biologi, Fakultas Sains dan Teknologi, Universitas Airlangga, Surabaya.

ABSTRAK

Penelitian ini mempunyai tujuan fungsional untuk mengklarifikasi posisi taksonomi spesimen yang diduga *Phyllophorus dobsoni* di perairan Pantai Timur Surabaya. Metode yang digunakan dalam penelitian ini, yaitu berdasarkan pendekatan karakter morfologi melalui pengamatan karakter morfologi dan mendeskripsikannya serta genetika molekuler melalui DNA *barcoding* menggunakan gen *Cytochrome Oxidase subunit I* (COI) pada DNA mitokondria. Kesimpulan penelitian ini, yaitu berdasarkan karakter morfologi menunjukkan bahwa spesimen yang diduga *Phyllophorus dobsoni* di Perairan Pantai Timur Surabaya mempunyai banyak kesamaan dengan *Phyllophorella spiculata* (Chang, 1935), berdasarkan metode genetika molekuler melalui analisis *Basic Local Alignment Search Tool* (BLAST) menunjukkan bahwa sekuen DNA spesimen yang diduga *Phyllophorus dobsoni* mempunyai kedekatan paling tinggi dengan *Phyrella mookiei voucher* UF4770 namun nilai kesamaan identitas hanya sebesar 88% maka nilai bedanya 12% yang menunjukkan bahwa nilai ini melewati nilai ambang batas kesamaan spesies sebesar 2%. Posisi taksonomi spesimen penelitian lebih tepat ditempatkan dalam Genus *Phyllophorella* karena berdasarkan rekonstruksi pohon filogenetik, spesimen penelitian terletak satu kelompok dengan *Phyllophorus kohkutiensis* dari Subgenus *Phyllophorus* (*Phyllophorella*) yang telah ditingkatkan menjadi Genus *Phyllophorella* dan didukung melalui pengamatan karakter morfologi mempunyai banyak kesamaan dengan *Phyllophorus parvipedes* yang saat ini mempunyai nama valid *Phyllophorella spiculata* (Chang, 1935).

Kata kunci: Taksonomi, *Phyllophorus dobsoni*, Morfologi, Genetika molekuler, Pantai Timur Surabaya

Ardiani Ika Pratiwi, 2018, Taxonomic Studies of *Phyllophorus dobsoni* in the Surabaya's East Coast Based on Morphological Characters and Molecular Genetics, This thesis under the guidance by Prof. Dr. Bambang Irawan, M.Sc. and M. Hilman Fu'adil Amin, S.Si., M.Si., Departement of Biology, Faculty of Science and Technology, Universitas Airlangga, Surabaya.

ABSTRACT

This study has a functional purpose to clarify the taxonomic position of specimens which assumed as *Phyllophorus dobsoni* in the Surabaya's East Coast Water. The method used in this study based on morphological characters approach through morphological characters observation and describe it along molecular genetics through DNA barcoding using *Cytochrome Oxidase subunit I* (COI) genes in mitochondrial DNA. The conclusion of this study, i.e. based on morphological characters indicate that specimens which assumed as *Phyllophorus dobsoni* in the Surabaya's East Coast Water has much in common with *Phyllophorella spiculata* (Chang, 1935), based on molecular genetics method through *Basic Local Alignment Search Tool* (BLAST) analysis showed that DNA sequence of specimens which assumed as *Phyllophorus dobsoni* had the highest proximity with *Phyrella mookiei voucher* UF4770 but the identity value was only 88%, the different value was 12 % indicating that this value passed the threshold value of species similarity 2%. The taxonomic position of specimens which assumed as *Phyllophorus dobsoni* more precise placed in Genus *Phyllophorella* because based on the phylogenetic tree reconstruction, specimens place in a group with *Phyllophorus kohkutiensis* of Subgenus *Phyllophorella* which has been upgraded to Genus *Phyllophorella* and supported by morphological characters observation have much in common with *Phyllophorus parvipedes* which currently has a valid name *Phyllophorella spiculata* (Chang, 1935).

Keywords: Taxonomy, *Phyllophorus dobsoni*, Morphology, Molecular genetic, Surabaya's East Coast