

**KEANEKARAGAMAN LUMUT DI LINGKUNGAN SEKOLAH  
MENENGAH KOTA YOGYAKARTA SEBAGAI PENUNJANG  
IMPLEMENTASI KURIKULUM 2013 DALAM PEMBELAJARAN  
BIOLOGI APLIKATIF**

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**INTISARI**

Kurikulum 2013 berorientasi pada pendekatan saintifik dengan memberikan pengetahuan, keterampilan, dan pembentukan sikap. Siswa diharapkan memiliki bekal ilmu berdasarkan fakta, konsep ilmu, dan praktik melalui mata pelajaran yang diberikan. Salah satu kompetensi dasar mata pelajaran Biologi adalah identifikasi dan klasifikasi keanekaragaman makhluk hidup sehingga perlu disediakan sarana pendukung pembelajaran. Lumut merupakan objek keanekaragaman yang menarik untuk diteliti karena keunikan morfologi dan ekologinya tetapi masih jarang dieksplorasi. Hingga saat ini, penelitian dan publikasi mengenai keanekaragaman lumut di lingkungan sekolah menengah Kota Yogyakarta sebagai Kota Pelajar belum pernah dilakukan sehingga menarik untuk diteliti. Penelitian ini bertujuan mengetahui keanekaragaman jenis, klasifikasi, dan distribusi tumbuhan lumut di lingkungan sekolah menengah Kota Yogyakarta serta potensi penggunaannya sebagai penunjang implementasi kurikulum 2013 dalam pembelajaran biologi aplikatif. Pengumpulan sampel lumut dilakukan dengan metode jelajah pada 15 SMP dan 15 SMA di Kota Yogyakarta. Sampel lumut dikoleksi dengan teknik herbarium kering dan diidentifikasi di Laboratorium Sistematika Tumbuhan UGM. Analisis vegetasi lumut dilakukan dengan metode kuadrat plot 15 cm x 15 cm yang didistribusikan secara acak pada 30 lokasi pengamatan. Analisis data lingkungan dilakukan dengan mengukur parameter lingkungan yaitu suhu udara, kelembaban udara, intensitas cahaya, ketinggian dan ketinggian tempat. Variasi keanekaragaman lumut dianalisis dengan indeks keanekaragaman Shannon-Wiener. Analisis distribusi lumut didasarkan atas nilai penting. Hasil dari penelitian ini ditemukan 13 jenis lumut yang dapat dikelompokkan dalam 2 kelas yaitu Hepaticopsida dan Bryopsida. Jenis-jenis lumut tersebut adalah *Cheilolejeunea intertexta* (Lindenb.) Steph., *Cyathodium spruceanum* Porsk., *Riccia haskarliana* Steph., *Trocholejeunea sandvicensis* Schiffn., *Barbulla javanica* Dozy & Molk., *Bryum coronatum* Schwaegr., *Calymperes tenerum* C. Mull., *Ectropothecium buitenzorgii* (Bel.) Jaeg., *Fissidens atroviridis* Besch., *Gymnostomiella vernicosa* (Hook.) Fleisch. *Hyophila involuta* (Hook.) Jaeg., *Octoblepharum albidum* Hedw., dan *Vesicularia dubyana* (C. Muell.) Broth. Jenis-jenis lumut yang terdistribusi luas di lingkungan sekolah menengah Kota Yogyakarta adalah *Barbulla javanica*, *Fissidens atroviridis*, *Calymperes tenerum*, *Gymnostomiella vernicosa*, dan *Hyophila involuta*. Hasil tersebut dapat digunakan untuk pengenalan keanekaragaman lumut sebagai sarana penunjang pembelajaran Biologi aplikatif untuk mendukung implementasi kurikulum 2013 bagi peserta didik SMP dan SMA di Kota Yogyakarta.

Kata kunci: keanekaragaman lumut, sekolah menengah, Kota Yogyakarta, kurikulum 2013, biologi aplikatif

## THE DIVERSITY OF BRYOPHYTE AT JUNIOR AND SENIOR HIGH SCHOOLS ENVIRONMENT IN YOGYAKARTA CITY TO SUPPORTING THE IMPLEMENTATION OF CURRICULUM 2013 IN BIOLOGY LEARNING APPLICATIVE

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### ABSTRACT

Orientation of curriculum 2013 based on scientific which it provides knowledge, skills, and establishment attitude. Students are expected to have provision of science based on facts, science concepts, and practices through subjects at school. One of basic competence in Biology is identification and classification of the diversity of living things that needs facilities to support learning activities. Diversity of bryophyte is very interesting to study because it has a unique morphology and ecology but rarely explored. Until now, research and publications about the diversity of bryophytes at Junior and Senior High Schools environment of Yogyakarta as education city has never been done, so this research will be interesting to be carried out. This research aims to determine the diversity, classification, and distribution of bryophyte species at Junior and Senior High Schools environment of Yogyakarta and its potential use to support the implementation of curriculum 2013 in biology learning applicative. The collecting method of bryophyte samples was performed by exploration method, that was by taking bryophyte samples from 15 Junior High Schools and 15 Senior High Schools in Yogyakarta. Bryophyte samples were collected using dried herbarium technique and were identified in Laboratory of Plant Systematics UGM. The bryophyte vegetation analysis was done by quadratic method (15 cm x 15 cm) that was randomly distributed on 30 observation stations. Analysis of environmental data carried out by measuring environmental parameters such as air temperature, humidity, light intensity, and altitude. Variation of bryophyte species diversity was analyzed by the Shannon-Wiener diversity index. The distribution analysis of bryophyte were obtained based on importance values. There were found 13 species of bryophyte that can be classified into 2 classes as Hepaticopsida and Bryopsida. The species have been identified as *Cheilolejeunea intertexta* (Lindenb.) Steph., *Cyathodium spruceanum* Porsk., *Riccia haskarliana* Steph., *Trocholejeunea sandvicensis* Schiffn., *Barbula javanica* Dozy & Molk., *Bryum coronatum* Schwaegr., *Calymperes tenerum* C. Mull., *Ectropothecium buitenzorgii* (Bel.) Jaeg., *Fissidens atroviridis* Besch., *Gymnostomiella vernicosa* (Hook.) Fleisch., *Hyophila involuta* (Hook.) Jaeg., *Octoblepharum albidum* Hedw., and *Vesicularia dubyana* (C. Muell.) Broth. Bryophyte species which have been broadly distributed at Junior and Senior High Schools environment of Yogyakarta were *Barbula javanica*, *Fissidens atroviridis*, *Calymperes tenerum*, *Gymnostomiella vernicosa*, and *Hyophila involuta*. This result can be used for introduction diversity of bryophyte and support the implementation of curriculum 2013 especially in biology learning applicative for Junior and High School students in Yogyakarta.

Keywords: diversity of bryophyte, junior and high school, Yogyakarta city, curriculum 2013, biology applicative