

## Studi sistematika smilacaceae di Jawa berdasarkan karakter morfologi dan molekuler = The Systematic study of smilacaceae in Java based on morphology and molecular characters

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### Abstrak

#### **ABSTRAK**

Sebanyak sepuluh jenis Smilacaceae ditemukan di Jawa termasuk didalamnya satu jenis baru dan tiga tipifikasi telah dibuat. Batasan setiap jenis termasuk status konservasi dan kunci identifikasi jenis telah diformulasikan. Jawa Barat merupakan pusat persebaran Smilacaceae di Jawa dan *Smilax macrocarpa* merupakan jenis yang paling banyak dimanfaatkan. Pohon filogenetik dari data morfologi yang dianalisis dengan MP menunjukkan bahwa Smilacaceae bersifat monofiletik. Tingkat keberhasilan amplifikasi dan sekuensing dengan menggunakan penanda molekuler *rbcL* sebanyak 93.75% diikuti *matK* (87.5%) dan ITS (81.25%). Semua pohon filogenetik menunjukkan Smilacaceae bersifat monofiletik dan *Heterosmilax* mengelompok dengan *Smilax*. Sehingga disarankan *Heterosmilax* menjadi seksi dari *Smilax*. Pohon filogenetik berdasarkan data ITS yang dianalisis dengan MP menghasilkan topologi pohon terbaik. *Smilax kotschii*, *S. nageliana* dan *S. zeylanica* mengelompok bersama-sama. *Smilax micrantha* mengelompok bersama dengan jenis *Heterosmilax*. Jenis baru, *Smilax seminamagnifica* mengelompok bersama *S. macrocarpa*. *Smilax modesta* mengelompok bersama *S. odoratissima*. *Smilax blumei* mengelompok bersama *S. leucophylla*. Topologi pohon ini mirip dengan topologi pohon yang dihasilkan data morfologi dan mendukung konsep dasar kunci identifikasi yang telah dibuat.

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#### **ABSTARCT**

A total of ten species of Smilacaceae are known housed in Java with one newly described species and three typifications have been designated. The circumscriptions for each species were delineated including its conservation status and key to the species was formulated. West Java is the centre distribution of Smilacaceae in Java and *Smilax macrocarpa* is the most widely used species. A strict consensus tree revealed from morphological characters using MP analysis showed that Smilacaceae is a monophyletic. The *rbcL* region successly amplified and sequenced 93.75% from the samples followed by *matK* (87.5%) and ITS (81.25%). The all trees showed that Smilacaceae is a monophyletic and *Heterosmilax* embedded in *Smilax*. It was suggested that *Heterosmilax* was placed as a section under *Smilax*. Phylogenetic tree based on ITS region using MP is the most resolved tree than the others. *Smilax kotschii*, *S. nageliana* and *S. zeylanica* clustered together. The prickle-less species, *Smilax micrantha* clustered together with *Heterosmilax* species. The newly described species, *Smilax seminamagnifica* clustered with *S. macrocarpa*. *Smilax modesta* clustered with *S. odoratissima*. *Smilax blumei* clustered with *S. leucophylla*. It is more or less similar with phylogenetic tree produced by morphology data and supported the basic concept of

identification key. </p>