*Phytotaxa* 10: 58–59 (2010)
www.mapress.com/phytotaxa/


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ISSN 1179-3155 (print edition)
**PHYTOTAXA**
ISSN 1179-3163 (online edition)

# New combinations in the fern genus *Tectaria* (Tectariaceae) for the Flora of China

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## Abstract

For studies on the fern family Tectariaceae for the Flora of China, four species previously treated as *Ctenitopsis* need new combinations in *Tectaria*. The new combinations are proposed here and information on their types is provided.

## Introduction

The generic delimitation in Tectariaceae has been in considerable flux in the recent past. Molecular studies (e.g. Hasebe *et al.* 1995) have greatly increased the understanding of the placement of many genera and has redefined genera in Tectariaceae. Currently the family is considered to be composed of ca 10 genera (*Aenigmopteris*, *Arthropteris*, *Heterogonium*, *Hypoderris*, *Pleocnemia*, *Psammiosorus*, *Psomiocarpa*, *Pteridrys*, *Tectaria* and *Triplophyllum*). The genera *Ataxipteris*, *Ctenitis*, *Dryopsis* and *Lastreopsis*, previously associated with Tectariaceae, are now considered to belong to the Dryopteridaceae (Smith *et al.* 2006), and Liu *et al.* (2007) also placed *Pleocnemia* tentatively in that family. *Arthropteris* and *Psammiosorus* form a group sister to the rest of Tectariaceae (Hasebe *et al.* 1995), and for this reason are placed there (Liu *et al.* 2007), even though this makes the family difficult to define morphologically (Smith *et al.* 2006). Genera such as *Amphiblestra*, *Camptodium*, *Chlamydogramme*, *Cionidium*, *Ctenitopsis*, *Dictyoxiphium*, *Fadyenia*, *Hemigramma*, *Pleuroderris*, *Pseudotectaria* and *Quercifilix* are found to be embedded in *Tectaria* and are therefore included into that genus. Many combinations already exist to accommodate these generic changes, but for four of the Chinese species of *Ctenitopsis,* combinations are still needed. While revising the Tectariaceae for the *Flora of China*, I provide these combinations below with their type information.

***Tectaria acrocarpa* (Ching) Christenh., *comb. nov.***
Basionym:—*Ctenitopsis acrocarpa* Ching in Ching & Wang (1981: 124).
Type:—CHINA: Yunnan: Jinping, *S.K. Wu 3985* (holotype PE).

***Tectaria chinensis* (Ching & Chu H.Wang) Christenh., *comb. nov.***
Basionym:—*Ctenitopsis chinensis* Ching & Wang (1981: 124).
Type:—CHINA: Yunnan: Hekou, *Department of Biology of Yunnan University 512* (holotype PE)

***Tectaria sagenioides* (Mett.) Christenh., *comb. nov.***
Basionym:—*Aspidium sagenioides* Mettenius (1858: 397).
Homotypic synonyms:—*Dryopteris sagenioides* (Mett.) Kuntze (1891: 813), *Ctenitopsis sagenioides* (Mett.)

 *Accepted by R. Govaerts: 8 Jun. 2010; published: 28 Oct. 2010*

Ching (1938: 312), *Ctenitis sagenioides* (Mett.) Copeland (1947: 124), *Heterogonium sagenioides* (Mett.) Holttum (1949: 161).
Type:—INDONESIA: Java: *Zollinger 1803* (lectotype Z, designated here; the holotype at B is no longer extant).

***Tectaria subsageniacea* (Christ) Christenh., *comb. nov.***
Basionym:—*Aspidium subsageniaceum* Christ (1906: 240)
Homotypic synonyms:—*Ctenitopsis subsageniacea* (Christ) Ching (1938: 311), *Dryopteris subsageniacea* (Christ) Christensen (1913: 40), *Heterogonium subsageniaceum* (Christ) Holttum (1955: 273).
Type:—CHINA: Guizhou: Tien-Sen-Kiao, sud Tin-Fan, près rivière, nov. 1904, *Cavalerie 1916* (holotype P?, not found).

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