



# New combinations in *Crystallopollen* Steetz (Asteraceae: Vernonieae), the correct name for the illegitimate *Polydora* Fenzl ex H.Rob.

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*Polydora* Fenzl (1844) is recognised to be a nomen nudum that was only validly published by Robinson (1999). The inclusion by Robinson (1999) of the earlier validly published *Crystallopollen* Steetz ([in Peters] 1864) as a synonym however, rendered *Polydora* Fenzl ex H.Rob. (1999) superfluous and so illegitimate. *Crystallopollen* Steetz ([in Peters] 1864) is therefore the correct name for the genus as circumscribed by Robinson (1999) and later authors. Only one of the names currently accepted in *Polydora* has a combination in *Crystallopollen* and the necessary additional combinations are provided here for *C. bainesii* (Oliv. & Hiern) J.C.Manning, *C. chloropappum* (Baker) J.C.Manning, *C. jelliae* (S.Moore) J.C.Manning, *C. mbalense* (G.V.Pope) J.C.Manning, *C. rhodesiana* (S.Moore) J.C.Manning, *C. serratuloides* (DC.) J.C.Manning and *C. sylvicola* (G.V.Pope) J.C.Manning.

**Keywords:** Africa; classification; illegitimate superfluous name; nomenclature; nomen nudum; taxonomy.

## Introduction

The genus *Polydora* Fenzl (1844) (Asteraceae: Vernonieae) is one of twelve segregates of *Vernonia* Schreb. that were recognised by Robinson et al. (2016) in their synopsis of the southern African members of the tribe Vernonieae. It comprises mostly annual herbs with L-shaped or asymmetrically T-shaped hairs on the stems, a 6- or 7-seriate involucre of acute to awned bracts and lophate, pantoporate pollen (Robinson et al. 2016; Swelankomo et al. 2018). The generic circumscriptions adopted by Robinson et al. (2016) followed his earlier conclusion (Robinson 1999) that *Vernonia* in the narrow sense was restricted to the Western Hemisphere, and that the African and Asian taxa previously included in it had to be removed to other genera in order to render it monophyletic.

The revised classification proposed by Robinson (1999) was adopted for the southern African flora by Herman and Swelankomo (2011), who provided a nomenclator for the flora of the region. This was superseded by the more comprehensive synopsis provided by Robinson et al. (2016). None of these three accounts included critical taxonomic assessments of the species themselves. These have now been provided for some of the genera, viz. *Distephanus* Cass. (Swelankomo & Manning 2014), *Gymnanthemum* Cass. (Swelankomo et al. 2016a), *Hilliardiella* H.Rob. (Swelankomo et al. 2016b) and most recently *Polydora* Fenzl (Swelankomo et al. 2018).

It has since emerged that the generic name *Polydora* was not validly published by Fenzl (1844) and that the earliest available name for the genus is *Crystallopollen* Steetz ([in Peters] 1864). We examine this issue here and summarise the

nomenclature, as well as providing several new combinations in *Crystallopollen* for taxa currently recognised in *Polydora*.

## Materials and methods

Nomenclatural decisions follow the latest version of the International Code of Nomenclature for algae, fungi, and plants (Shenzhen Code) (Turland et al. 2018). The list of species accepted in *Polydora* follows that provided by Robinson (1999) and Swelankomo et al. (2018) with additions from Pope (1992).

## Results and nomenclature

The generic name *Polydora* was published by Fenzl (1844) in a checklist as the simple binomial *P. stoechadifolia*, and was thus not validly published here, as it lacked an accompanying description or reference to such a description (Turland et al. 2018: ICN, Art. 38.1). The binomial *P. stoechadifolia* Fenzl (1844) is likewise a *nomen nudum*. This name is currently regarded as a synonym of *P. serratuloides* (DC.) H.Rob. (1999).

Robinson (1999) overlooked the fact that *Polydora* was not validly published, and his description of the genus constitutes its valid publication, and it is thus to be attributed to him. In a further complication, his inclusion of the earlier validly published *Crystallopollen* Steetz ([in Peters] 1864) as a synonym, which should have been adopted as the earliest available name, renders *Polydora* Fenzl ex Robinson (1999) an illegitimate superfluous name (Turland et al. 2018: ICN, Art. 52.1).

*Crystallopollen* Steetz ([in Peters] 1864) was published for the two species *C. angustifolium* Steetz and *C. latifolium* Steetz, without the designation of a type. The citation by Robinson (1999) of *C. angustifolium* as the type of *Crystallopollen* is thus to be regarded as designation of that species as the type (Turland et al. 2018: ICN Art. 10.2). The combination of this name in *Polydora* was also provided by Robinson (1999). The second species, *C. latifolium*, is the type of *Vernoniastrum* H.Rob. (1999).

The generic name *Crystallopollen* Steetz is thus the earliest available name for the group of species treated as *Polydora* by Robinson (1999) and later authors. Unfortunately, only one of the several species that are currently included in the genus has a combination in *Crystallopollen* and we therefore provide the necessary combinations here. Typification of the names is provided in Pope (1986) and Swelankomo et al. (2018).

**Crystallopollen** Steetz in Peters, Naturw. Reise Mosambique 6(Bot., 2): 363 (1864). Type species:

*C. angustifolium* Steetz, designated by Robinson: 232 (1999).

*Polydora* Fenzl ex H.Rob. in Proc. Biol. Soc. Washington 112(1): 232 (1999), nom. illeg. superfl. pro *Crystallopollen* Steetz ([in Peters] 1864); Robinson et al.: 103 (2016); Swelankomo et al.: 336 (2018). Type: *P. stoechadifolia* Fenzl, nom. nud. = *P. serratuloides* (DC.) H.Rob. [*Polydora* Fenzl in Flora 27: 312 (1844), nom. nud., without description]

- C. angustifolium** Steetz in Peters, Naturw. Reise Mosambique 6 (Bot., 2): 366 (1864). *Polydora angustifolia* (Steetz) H.Rob. in Proc. Biol. Soc. Washington 112(1): 232 (1999); Swelankomo et al.: 336 (2018). *Vernonia erinacea* H.Wild in Kirkia 11: 2 (1978) as nom. nov., non *V. angustifolia* Michx. (1803). *Vernonia poskeana* Vatke & Hildebrandt in Oesterr. Bot. Zeit. 25: 324 (1875). *Polydora poskeana* (Vatke & Hildebrandt) H.Rob. in Proc. Biol. Soc. Washington 112(1): 233 (1999). *Vernonia steetziana* Oliv. & Hiern in Oliv., Fl. Trop. Afr. 3: 273 (1877). *Polydora steetziana* (Oliv. & Hiern) H.Rob. in Proc. Biol. Soc. Washington 112(1): 233 (1999).
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- C. sylvicola** (G.V.Pope) J.C.Manning, comb. nov. *Vernonia sylvicola* G.V.Pope in Kew Bull. 41: 395 (1986).

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