

*Amyntas hsinpuensis* (Kuo, 1995) as a Synonym of  
*Amyntas rockefelleri* (Chen, 1933)  
(Megascolecidae: Oligochaeta)

新埔遠盲蚓 *Amyntas hsinpuensis* (Kuo) 定為洛克斐勒遠盲蚓 *Amyntas rockefelleri* (Chen) 之同種異名

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### Abstract

Characters were compared among the type specimens of *Amyntas hsinpuensis* (Kuo 1995) from Hsinchu, Taiwan and *Amyntas rockefelleri* (Chen 1933) from Chekiang, China, and specimens of *A. rockefelleri* from Taipei, Taiwan. They were undistinguishable in the characters and thus, *A. hsinpuensis* is synonymous to *A. rockefelleri*.

### 摘要

新埔遠盲蚓 *Amyntas hsinpuensis* (Kuo) 為1995年郭登志所發表，採集自新竹的新種蚯蚓。本文比較新埔遠盲蚓之模式標本、採自中國大陸浙江省洛克斐勒遠盲蚓之模式標本、以及採自台灣的洛克斐勒遠盲蚓三者之描述，發現新埔遠盲蚓與洛克斐勒遠盲蚓無種間之區別，故定新埔遠盲蚓為洛克斐勒遠盲蚓的同種異名。

**Key words:** *Amyntas hsinpuensis*, *Amyntas rockefelleri*, synonym

**關鍵詞:** 新埔遠盲蚓 *Amyntas hsinpuensis*、洛克斐勒遠盲蚓 *Amyntas rockefelleri*、同種異名

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Kuo (1995) collected six specimens of megascolecid earthworms from Hsinpu, Hsinchu County, Taiwan, and described them as a new species, *Pheretima hsinpuensis* (erroneously spelled as *Pheretima hsinpuensis*). It is a sixthcal earthworm of 110-120 mm in total length, with three setal lines on ventrum of clitellum, each with 8 setae, and paired genital papillae in VIII and XVII. It has rudimentary prostate glands and spermathecae with different stages of degeneration in size and number. According to the classification system of Sims and Easton (1972) for the genera of the *Pheretima* species complex of the family Megascolecidae, Tsai *et al.* (2000) assigned *P. hsinpuensis* to the genus *Amyntas* as *Amyntas hsinpuensis* (Kuo).

Table 1 compares the characters of *A. hsinpuensis* described by Kuo (1995) for the type specimens from Hsinchu, and *A. rockefelleri* described by Chen (1933) for the type specimens from Chekiang, China, and by Tsai (1964) for the specimens collected from Taipei, Taiwan. Both *A. hsinpuensis* and *A. rockefelleri* share the similar characters on setal number on ventrum of clitellum, number of spermathecal pores and positions, number, structure and positions of genital papillae in both preclitellar and postclitellar regions, and rudimentary prostate glands and spermathecae. However, *A. rockefelleri* from Taipei has no prostate glands (Tsai 1964), while *A. rockefelleri* from China (Chen 1933) and *A. hsinpuensis* from Hsinchu has no prostate gland on one side

and a normal to rudimentary prostrate gland on the other side. Based on the characters compared, *A. hsinpuensis* is undistinguishable from *A. rockefelleri*.

Accordingly, we consider that *Amyntas hsinpuensis* (Kuo 1995) is a synonym of *Amyntas rockefelleri* (Chen 1933), which belongs to the *gracilis* (= *hawayanus*) species-group of the genus *Amyntas* (Sims and Easton 1972) in the family Megascolecidae.

*Amyntas rockefelleri* is a peregrine earthworm with its original home in Chekiang, China (Chen 1933). It is also found in the Yakushima Island of the Ryukyus (Kobayashi 1941), Taipei (Tsai 1964), Hsinchu (Kobayashi 1938a, b) and Ilan (Chen and Shih 1996) of the northern Taiwan, and Hong Kong (Chen 1935). In the 1999 earthworm survey in the central Taiwan, we collected two specimens around the vicinity of Wushe, Nantou County at an elevation of about 1000m.

Easton (1981) considered *A. rockefelleri* (Chen) as a synonym of *Amyntas papulosus* (Rosa 1896). However, *A. rockefelleri* has two pairs of genital papillae in VIII and XVII, each large, round with flat or convex center (Chen 1933; Tsai 1964), whereas *A. papulosus* has numerous, small presetal and postsetal papillae in horizontal rows at least in XVII, XVIII and XIX and often in VII, VIII and IX (Shen *et al.* 2002). Both species are easily distinguishable by the size, structure and position of genital papillae alone. Accordingly, we considered that *A.*

**Table 1.** A comparison of characters between *Amyntas hsinpuensis* (Kuo) and *Amyntas rockefelleri* (Chen)

Character	<i>A. hsinpuensis</i> (Kuo 1995)	<i>A. rockefelleri</i> (Chen 1933)	<i>A. rockefelleri</i> (Tsai 1964)
Locality	Hsinchu, Taiwan	Chekiang, China	Taipei, Taiwan
Body length (mm)	110-120	85-130	82-122
Segment number	110-117	108-142	121-135
First dorsal pore	-	11/12	11/12
Prostomium	Epilobous	Epilobous	-
Setal number			
III	-	38-54	-
VI	-	58-70	-
VIII	-	58-75	58-74
XII	-	46-68	-
XIV (clitellum)	8	6-8	6-7
XV (clitellum)	8	10-14	7-9
XVI (clitellum)	8	12-16	10-12
XX	-	-	49-59
XXV	-	52-62	-
between male pores	11-12	12-16	10-12
Spermathecal pores	3 pairs (5/6-7/8)	3 pairs (5/6-7/8)	3 pairs (5/6-7/8)
Spermathecae	Last pair bigger than anterior pairs	First pair smallest, last pair largest	-
Genital papillae			
preclitellar	One pair in VIII	One or two pairs in VIII	One or two pairs in VIII
postclitellar	Large, postsetal in XVII, paired, medial to each male pore	Large, 2-4 postsetal in XVII, paired, medial to each male pore	Large, postsetal in XVII, paired, medial to each male pore
Hearts	4 pairs (X-XIII)	4 pairs (X-XIII)	-
Intestine enlarged from	XV	XVI or XVII	XV or XVI
Caeca	XXVII-XXIV or XXVII-XXIII	XXVII-XXIV or XXVII-XXIII	XXVII-XXIV
Testis	2 pairs	Large, paired in X, XI	Large, paired in X, XI
Seminal vesicle	-	Small	Small
Prostate glands	Normal in one side or tubular, twisted	Absent in most cases, normal in one side occasionally	Absent
Accessory glands	-	Large, compact mass	Large, compact mass

*rockefelleri* (Chen 1933) is a valid species in the *gracilis* species-group within the genus *Amyntas* (Sims and Easton 1972).

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