

Catalogue of Fresh Water Shells of Taiwan.

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Introduction

The history of the fresh water shell study in Taiwan dated back to 1866 when the British Vice-consul Robert Swinhoe had firstly collected shell specimens for the famous malacologists Cumming (1865) and H. Adams (1866a ; 1866b ; 1870). Lately some foreign enthusiastic scientists such as Smith, E. A. (1878), Nevill (1884), Schmacker and Boettger (1891), Pilsbry and Hirase (1905), Matsuda (1924), Hirase, S. (1932), Horikawa (1935a ; 1935b ; 1937), Taketani (1935), Kuroda (1939 ; 1941), Kaneko (1943), Habe (1942 ; 1943), Habe and Miyagi (1962), Reigle (1963), Burch and Natarajan (1965), Van der Schalie and Pace (1967), Pace (1973 ; 1975) frequently visited many localities in the island for shell collection or studied them. Among the reports published by the above workers, written by Kuroda (1941) and Pace (1973 ; 1975) were the important contributions to the study of Taiwan fresh water shell which included 47 species of fresh water shell in the total 1459 molluscan species listed in the former, and 42 species of the fresh water shell (39 species of snails, 3 species of Unionidae) in the latter.

Some subsequent works on Taiwan fresh water shells were done by Chen (1960), Lin (1974), Wu (1979a ; 1979b ; 1980) and Chang and Lin (1978) but little concerning Taiwan fresh water shells. Therefor in 1986 colleagues of our malacological society edited the list of Taiwan fresh water shells based on the literatures of Kuroda (1941) and Pace (1973 ; 1975). (The society magazine " *Pei-io* " 10 : 1-8. Pl. 1-4, Fig. 1-26) Although systematics of the fresh water shell was corrected much during recent several years.

The present fresh water shell catalogue is based mainly on a recent literatures of Habe (1990) and a personal communication from Habe (1991, May). This catalogue not includes

numbers appear in this list) because all of the Chinese names are not changed in spite of correcting of some systematics.

Acknowledgement

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Systemtic List

Class Gastropoda 腹足綱

Subclass Prosobranchia 前鰓亞綱

Order Archaeogastropoda 原始腹足目

Suborder Neritimorpha 蜆螺亞目

Superfamily Neritoidea 蜆螺超科

Family Neritidae 蜆螺科

Subfamily Neritinae 蜆螺亞科

Genus *Clithon* Montfort, 1810 石蜆螺屬

Clithon corona brevispinus (Lamarck, 1822) 棘石蜆螺

(Syn : *Clithon corona angulosa* (Reculz, 1842)?)

Clithon retropictus (Martens, 1879) 石蜆螺

Clithon sowerbianus (Reculz, 1842) 沙氏石蜆螺

Genus *Neritina* Lamarck, 1816 河蜆螺屬

Subgenus *Neritina* 1816 河蜆螺亞屬

Neritina (*N*) *pulligera* (Linne, 1767) 黃口蜆螺

Subgenus *Vittoida* H. B. Baker, 1923 球蜆螺亞屬

Neritina (*V*) *plumbea* (Sowerby, 1855) 球蜆螺 P1. 2, Fig.13*

Family Septaridae 壁蜆螺科

Genus *Septaria* Ferussac, 1807 壁蜆螺屬

Septaria porcellana (Linne, 1758) 壁蜆螺 (= *janelli* (Reculz, 1841))

Order Mesogastropoda 中腹足目

Superfamily Viviparoidea 田螺超科

Family Viviparidae 田螺科

Subfamily Bellamyinae 田螺亞科

Genus *Cipangopaludina* Hannibal, 1912 田螺屬

Cipangopaludina chinensis (Grey, 1834) 圓田螺 P1. 3, Fig.18

Cipangopaludina miyagii Kuroda, 1941 稜田螺

Genus *Sinotaia* Haas, 1939 石田螺屬

Sinotaia quadrata (Benson, 1842) 石田螺 P1.3, Fig.19

Family Ampullariidae 福壽螺科 (= Pilidae)

Genus *Ampullarius* Montfort, 1810 福壽螺屬 (= *Pomacea* Perry, 1810)

* 中文名稱後面所標示的圖譜號碼是“貝友”第10期的5—8頁圖譜號碼，請參照。

Ampullarius canaliculatus (Lamarck, 1819) 福壽螺

Genus *Pila* Röding, 1798 元寶螺屬 (= *Ampullaria* Lamarck, 1799)

Pila leopordovillensis (d'Orbigny) 元寶螺

Superfamily Rissoidea 鹿眼螺超科

Family Bithyniidae 沼螺科

Genus *Parafossarulus* Annandale, 1924 沼螺屬

Parafossarulus manchouricus (Bourguignat, 1860) 沼螺 P1.1, Fig.8.

Genus *Bithynia* Leach, 1818 圓沼螺屬

Bithynia fuchsiana Moellendorff, 1888 圓沼螺

Bithynia misella Gredler, 1884 臺灣圓沼螺

Family Pomatiopsidae 釘螺科

Genus *Oncomelania* Gredler, 1881 釘螺屬

Oncomelania hupensis formosana (Pilsbry & Hirase, 1905) 臺灣釘螺 P1.2.Fig.17

Oncomelania hupensis chiui (Habe & Miyazaki, 1962) 邱氏釘螺

Family Stenothyridae 栗螺科

Genus *Stenothyra* Benson, 1856 栗螺屬

Stenothyra formosana Pilsbry & Hirase, 1904 栗螺 (= *glabra* A. Adams, 1861)

Family Assimineidae 河山椒螺科

Genus *Assiminea* Habe, 1943 河山椒螺屬

Assiminea lutea A. Adams, 1861 黃河山椒螺

Genus *Sphaerassiminea* Habe, 1942

Sphaerassiminea brevucula (Pfeiffer, 1854) 短小河山椒螺

Genus *Ovassiminea* Thiele, 1927

Ovassiminea dohrniana (Nevill, 1880) 紅頂河山椒螺

Genus *Angustassiminea* (Habe, 1943) 栗色河山椒螺屬

Angustassiminea kurodai (Habe, 1942) 黑田河山椒螺

Genus _____ nov.

_____ *taiwaensis* (Habe, 1942) 臺灣河山椒螺

Family _____ nov. 新科未定

Genus *Taiwanassiminea* Kuroda & Habe, 1950

Taiwanassiminea hayashii Habe, 1942 林氏河山椒螺

Superfamily Cerithioidea 蟹守螺超科

Family Thiariidae 塔蜷科

Genus *Thiara* Röding, 1798 塔蜷屬

Subgenus *Plotiopsis* Brot, 1874 塔蜷亞屬

Thiara (P) scabra (Müller, 1774) 塔蜷 p1. 1, Fig.6

Genus *Tarebia* H. & A. Adams, 1854 瘤蜷屬

Tarebia granifera (Lamarck, 1882) 瘤蜷 P1. 1, Fig.2

Genus *Sermyla* H. & A. Adams, 1854 流紋蜷屬

Sermyla riqueti (Grateloup, 1840) 流紋蜷 P1. 1, Fig.4

Genus *Stenomelania* Fischer, 1885 細紋蜷屬

Stenomelania costellaris (Lea, 1850)? 細紋蜷

Stenomelania plicaria (Born, 1778) 錐蜷 P1. 1, Fig. 1(=junceas (Lea))

Stenomelania torulosa (Bruguiere, 1789)

(=crenulata (Deshayes)?) 結節蜷 P1. 1. Fig.7

Genus *Melanoides* Olivier, 1804 網蜷屬

Melanoides tuberculatus (Müller, 1774) 網蜷 P1. 1, Fig.3

Melanoides tuberculatus formosanus (Smith, 1878) 臺灣網蜷 P1. 1, Fig.5

Family Pleuroceridae 川蜷科

Genus *Semisulcospira* Böttger, 1886 川蜷屬

Semisulcospira libertina (Gould, 1859) 川蜷 P1. 1, Fig.9

Subclass Pulmonata 有肺亞綱

Order Basommatophora 基眼目

Superfamily Lymnaeoidea 椎實螺超科

Family Lymnaeidae 椎實螺科

Genus *Radix* Montfort, 1810 椎實螺屬

Radix auricularia swinhoei (H. Adams, 1866) 臺灣椎實螺 P1. 2, Fig.10

Genus *Austropeplea* Cotton, 1942 小椎實螺屬

Austropeplea ollula (Gould, 1859) 小椎實螺 P1. 2, Fig.11

Superfamily Physoidea 囊螺超科

Family Physidae 囊螺科

Genus *Physa* Draparnaud, 1810 囊螺屬

Physa acuta (Draparnaud, 1805) 囊螺 P1. 2, Fig.12

Superfamily Planorbioidea 扁蜷超科

Family Planorbidae 扁蜷科

Genus *Gyraulus* Agassiz in Charpentier, 1837 圓口扁蜷屬

Gyraulus chinensis spirillus (Gould, 1859) 圓口扁蜷

Genus *Polypylis* 類扁蜷屬

Polypylis Hemisphaerula Benson, 1842 臺灣類扁蜷 P1. 2, Fig.16

Genus *Hippeutis* Agassiz in Charpentier, 1837 平扁蜷屬

Hippeutis umbilicalis umbilicalis (Benson, 1836) 平扁蜷 P1. 2, Fig.15

Hippeutis cantori (Benson, 1850) 廣東平扁蜷

Family Ancyliidae 盤蜷科

Subfamily Ferrissinae 盤蜷亞科

Genus *Ferrissia* Walker, 1903 盤蜷屬

Ferrissia sp. Kuroda, 1941 盤蜷

Class Bivalvia 雙殼綱

Order Anisomyaria 異柱目

Superfamily Mytilacea 殼菜蛤超科

Family Mytilidae 殼菜蛤科

Genus *Limnoperna* Rochebrune, 1882 河殼菜蛤屬

Limnoperna fortunei (Dunker, 1855) 河殼菜蛤

Order Unionoida 蚌目

Superfamily Unionoidea 蚌超科

Family Unionidae 蚌科

Genus *Unio* Philipsson, 1788 蚌屬

Unio douglasiae taiwanicus (Pilsbry, 1905) 臺灣石蚌 P1. 3, Fig.22

Genus *Cristaria* Schumacher, 1817 稜蚌屬

Cristaria discoidea (Lea, 1834) 稜蚌 P1. 3, Fig.21

Genus *Anodonta* Lamarck, 1799 圓蚌屬

Subgenus *Sinanodonta* Modell, 1945 圓蚌亞屬

Anodonta (*S*) *woodiana* (Lea, 1834) 圓蚌 P1. 3, Fig.20

Subclass Heterodonta 異齒亞綱

Order Veneroida 簾蛤目

Superfamily Corbiculoidea 蜆超科

Family Corbiculidae 蜆科

Subfamily Corbiculinae 蜆亞科

Genus *Corbicula* Mergle von Mühlfield, 1811 蜆屬

Subgenus *Corbiculina* Dall, 1903 真蜆亞屬

Corbicula (*Corbiculina*) *fluminea* (Müller, 1774) 臺灣蜆 P1. 4, Fig.23

Corbicula (*Corbiculina*) *insularis* Prime, 1864 島蜆

Genus *Cyrenodonax* Dall, 1903 花蜆屬

Cyrenodonax formosanus (Dall, 1903) 臺灣花蜆

Subfamily Polymesodinae 紅樹蜆亞科

Genus *Geloina* Gray, 1842 紅樹蜆屬

Geloina coaxans (Gmelin, 1791)

(= *proxima* Prime, 1864) (= *expansa* Mousson?) (= *erosa* Lightfoot)

紅樹蜆 P1. 4, Fig.25

Genus *Cyrenobatissa* Suzuki & Ooyama 大蜆屬

Cyrenobatissa subsulcata (Clessin, 1817) 大蜆 P1. 4, Fig.24

Family Sphaeridae 泥蜆科

Genus *Sphaerium* Scopoli, 1777 泥蜆屬

Sphaerium okinawaense Mori, 1937 泥蜆

Family Pisidiidae 豌豆蜆科

Genus *Pisidium* Pfeiffer, 1821 豌豆蜆屬

Pisidium casertanum var. *taiwanense* Kuroda, 1941 臺灣豌豆蜆

Pisidium casertanum var. *tienchiense* Chang & Lin, 1978 長臺灣豌豆蜆

P1. 4, Fig.26

臺灣（包括離島）非海產
水棲貝類之文獻：

Bibliography on fresh water shells of Taiwan.

(Including offshore islands)

- Adams, H. 1866a. List of species of mollusks recently collected by Robert Swinhoe Esq., H. B. M. Vice-consul, C. M. Z. S., in Formosa. *Proc. zool. Soc. London*. 1866 : 146.
- Adams, H. 1866b. Description of fifteen new species of land and fresh water shells from Formosa, collected by Robert Swinhoe, Esq., Consul of Taiwan in that island. *Proc. zool. Soc. London*. 1866 : 316-319.
- Adams, H. 1870. Description of ten new species of land and fresh water shells collected by Robert Swinhoe, Esq., in China and Taiwan. *Proc. zool. Soc. London*. 1870 : 377-379.
- Burch, J. B. and Natarajan, R. 1965. Cytological studies of Taiwan fresh water pulmonate snails. *Bull. Inst. zool. Acad. Sinica*. 4 : 11-17.
- Chang, K.M. and Lin, C. C. 1978. Description of a new subspecies of *Pissidium taiwanense* from Tienchi, Taiwan. *Bull. Mal. Chin.* 5 : 23-28
- Chen, J. T. F. 1960. A check-list of mollusk shells of the biology department, Science College. Tunghai University. *Biol. Bull. Tunghai Univ.*, 2:1-16.
- Cuming, H. 1865 List of species of mollusks recently collected by Mr. R. Swinhoe in Formosa. *Proc. zool Soc. London*. 1865 : 196-197.
- Habe, T. and Miyazaki, I. 1962. *Tricula chiui* sp.nov., a new snail host of lung fluke *Paragonimus iloktsuensis* Chen in Formosa. *Kyushiu J. med. Sci.*, 13 : 47-49.
- Habe, T. 1942. Classification of Japanese Assimineidae. *Venus*. 12 : 32-56.
- Habe, T. 1943. Supplemental note with correction on the Japanese Assimineidae. *Venus*. 13 : 96-106.
- Habe, T. 1990. Catalogue of fresh water shells of Japan. *Hitachiobi*. 54 : 3-9, 55 : 3-9, 56 : 3-7.
- Hirase, S. 1932. Note on Formosa Lymnaea. *Biologica*. 2 : 1-15.
- Horikawa, Y. 1935a. A list of fresh water shells of Taiwan. *Venus*. 5 : 26-33.
- Horikawa, Y. 1935b, Distribution of fresh water shells of Taiwan. *Trans. Nat. Hist. Soc. Taiwan*. 25 : 226-231.

- Horikawa, Y. 1937. Human life in relation to the fresh water shells of Taiwan. *Trans. Nat. Hist. Soc. Taiwan*. 17 : 177-182.
- Kaneko, S. 1943. Shells from Anpin and its vicinity. *Trans. Nat. Hist. Soc. Taiwan*. 33 : 606-677.
- Kuroda, T. 1939. Angulate pond snail from Taiwan. *Venus*. 9 : 47-49.
- Kuroda, T. 1941a. A catalogue of molluscan shells from Taiwan (Formosa), with description of new species. *Mem. Fac. Sci. Agr., Taihoku Imp. Univ.* 22 : 65-216.
- Kuroda, T. 1941b. Description of a new pond snail from Taiwan. *Venus*. 10 : 129-130.
- Lin, C. C. 1974. Mollusks of Lanyu and their zoogeography. *Bull. Mal. Chin.* 1 : 42-63.
- Matsuda, E. A. 1924. (Taiwan no kairui mokuroku). *Trans. Nat. Hist. Soc. Formosa*. 14 : 41-59.
- Nevill, G. 1884. Handlist of mollusca in the Indian Museum. Calcutta. Part II. *Indian Museum, Calcutta*. 306p.
- Pace, G. L. 1973. The fresh water snails of Taiwan (Formosa). *Malacological Review*. 1973. Suppl. 1. 1-118.
- Pace, G. L. 1975. The fresh water mussels (Bivalvia : Unionidae) of Taiwan (Formosa). *Bull. Mal. Chin.* 2 : 47-62.
- Pilsbry, H. and Hirase, Y. 1905. Catalogue of the land and fresh water mollusca of Taiwan (Formosa), with description of new species. *Proc. Acad. Natur. Sci. Phil.* 57 : 720-752.
- Reigle, N. J. 1963. Notes on the mollusks of Lanyu, Taiwan. *Quart. J. Taiwan Museum*. 16 : 81-87.
- Schmacker, B. and Boettger, O. 1891. Neue Materialien zur Charakteristik und geographischen Verbreitung chinesischer Binnenmoll. II. *Nachrb. d. Malakozoo. Ges.* 23 : 145-194.
- Smith, E. A. 1878. Descriptions of five new shells from the island of Formosa and the Persian gulf, and notes upon a new known species. *Proc. zool. Soc. London*. 1878 : 728-733.
- Taketani, M. 1936. A collection of land mollusca from Taiwan (Formosa). *Trans. natur. Hist. Soc. Formosa*. 26 : 271-278.
- Taki, I. 1941. Anatomical study of *Cipangopaludina miyagi* Kuroda. *Venus*. 10 : 131-134.
- Van der Schalie, H. and Pace, G. L. 1967. The fresh water mollusca of Taiwan (Formosa). *Amer. malacol. Union. ann. Repts.* 34 : 26-27.
- Wu, W. L. 1979a. Morphometric studies on *Corbicula fluminea* (Müller, 1774). *Bull. Mal. Chin.* 6 : 1-12.
- Wu, W. L. 1979b. Geographical distribution of *Unio douglasiae* (Griffith and Pidgeon, 1834) in Taiwan. *Bull. Mal. Chin.* 6 : 69-74.

- Wu, W. L. 1980. The list of Taiwan bivalvia fauna. *Quart.J. Taiwan Museum.*, 33 (1-2) : 55-208.
- Colleague of Mal. Soc. Chin. 1986. List of fesh water shells of Taiwan. *Pei-io* 10 : 1-8. pl. 1-4, fig. 1-26.

臺灣淡水棲貝類目錄

張寬敏 編 撰
波部忠重 審 閱

關鍵詞：臺灣，淡水貝，動物相。

關於臺灣產淡水棲貝類的資料，也像臺灣產陸棲貝類相同散見於十九世紀以來之德、美、英、法及日本各國之學術雜誌中，且多以拉丁文、德文、英文、法文或日文刊載記述。至目前為止除本貝類學會“貝友”誌第10號(1986年)臺灣產淡水棲貝類目錄，另外尚未曾有中文之目錄及任何解說之書籍出版物。如欲知其全般狀況，惟有參閱日人黑田德米於1941年所編的「臺灣產貝類目錄」(臺北帝國大學理農學部紀要：第22卷第4號65-216頁)，美國人G.L.Pace於1973年編的“Fresh water snails of Taiwan (Formosa)” (*Malacological Review*. 1973. Supplement 1.) 及同著者於1975年編的“The fresh-water mussels (Bivalvia) of Taiwan (Formosa)” (中華民國貝類學會誌第二號47-61頁)，巫文隆於1980年編的臺灣雙殼軟體動物目錄(臺灣省立博物館季刊：第33卷第1、2號55-208頁)而已。

本會同仁共同編撰的上記“貝友”誌第10號之目錄已經至今有五年，這期間淡水棲貝類之系統分類頗有變動，因此編者乃依據最近的系統分類※改編上記目錄，而且經日本斯學的泰斗波部忠重的審閱。

主要修改下列各項：

- (一) Neritidae 蜺螺科，有些種類溯上至淡水域可包括於本目錄。但 *Clithon oualaniensis* (Lesson) 小石蜺螺，*Neritina (N) variegata* (Lesson) 斑蜺螺，*Dostia violacea* (Gmelin) 寬口蜺螺等是棲息限於半鹹水域未曾有棲於淡水域之報告，因此不包括在本目錄。
- (二) *Septaria janelli* (Reculz) 壁蜺螺，有不少的異名，因此採用最早的學名 *porcellana* (Linne).
- (三) 關於 Assimineidae 河山椒螺科，Pace採用的Brandt, 1944年的分類是不充分。因該分類沒有考慮有無齒舌中主齒之後齒尖。僅 *Assiminea lutea* A. Adams 可屬於 *Assiminea* 屬 *dohrniana* 是 *Ovassiminea* 屬的模式種。*kurodai* 是 *Angustassiminea* 屬。*hayashii* 之齒舌完全與其他河山椒螺不相同，是 *Taiwanassiminea* 屬，而因其眼睛在觸角前端或在觸角基部，現時還要查明，不一定屬於其他科。*taiwanensis* 是因眼睛在觸角前端，在其齒舌

的中齒沒有後齒尖，爲此雖然屬在本科但應該爲這種要設一新屬。

(四)*Stenomelania* 細紋蜷屬的種名很不穩定。尤其 *Stenomelania costellaris* 細紋蜷需要再檢討。

(五)*Gyraulus spirillus* 圓口扁蜷是香港產 *Gyraulus chinensis* 之亞種，因此要改 *G. chinensis spirillus* 或統一呼稱 *G. chinensis* 就好。

(六)*Geloina* 紅樹蜆屬的 *proxima*, *expansa* 都是 *coaxans* 的異名。*coaxans* Gmelin, 1791 以前已有 *erosa* Lighfoot 的學名，但因已拾多年人家都慣稱 *coaxans* 的名稱，本目錄採用該種名。

本目錄乃依據系統分類順序列出貝類之學名，中文名稱。螺，蜷及雙殼貝之中文種名乃依據本會之貝名訂名小組所研訂之名稱。因此本目錄之中文名稱部分相同與“貝友”誌第10號所登載的目錄而其彩色圖譜依然可供參考。(標示於表中)

※依據波部忠重1990.日本非海產水棲貝類目錄“ひたちおび”第54, 55, 56號