中国外来入侵植物的学名考证 (2)*

寿海洋, 闫小玲, 马金双**

(中国科学院上海辰山植物科学研究中心, 上海 201602)

摘要: 报道中国外来入侵植物的文献众多, 然而不少物种的学名使用混乱。不同时期、不同地区的不同作者在报道同一物种时, 使用不同的学名, 或因中文名相近, 将其他物种作为外来入侵植物报道, 从而给入侵植物的研究造成混乱。依据最新植物志等权威资料, 对国内文献报道的 20 种入侵植物的学名进行了考证, 包括中名、异名, 原产地及其在国内外的扩散情况以及必要的讨论等。

关键词: 外来; 入侵植物; 学名考证; 中国

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Nomenclatural Notes on Alien Invasive Vascular Plants in China (2)

SHOU Hai-Yang, YAN Xiao-Ling, MA Jin-Shuang**

(Shanghai Chenshan Plant Science Research Center, Chinese Academy of Sciences, Shanghai 201602, China)

Abstract: Some literatures recorded on the invasive plants in China are confused. Authors from the different regions in different time treated same species with different scientific names, or different species with same Chinese name, especially in the local reports. All those made it much worse in the study of alien invasive plants in China. This work reports twenty confused species, includes their scientific and Chinese names, synonyms, their origin, distribution in China, and necessary discussions.

Key words: Alien; Invasive plants; Scientific names; Nomenclatural notes; China

1. *Amaranthus hypochondriacus* Linnaeus, Sp. Pl. 2: 991. 1753; Sergei L. Mosyakin & Kenneth R. Robertson in Fl. N. Amer. 4: 415. 2003. Syn. *Amaranthus leucocarpus* Sereno Watson, Proc. Amer. Acad. Arts 10: 347. 1875 (Amaranthaceae).

Prince-of-Wales Feather (千穗谷), native to North America, is widely cultivated as ornamental, pseudocereal, and fodder crops in many tropical to warm-temperate regions of the world. Occasionally, it occurs as escapes near the places of cultivation. In China, it has been treated as *Amaranthus leucocarpus* (Hu *et al.*, 2005), and cultivated in Anhui,

Hebei, Jilin, Nei Mongol, Sichuan, Xinjiang, and Yunnan.

2. *Brassica juncea* (Linnaeus) Czernajew, Consp. Pl. Charc. 8. 1859; Suzanne I. Warwick in Fl. N. Amer. 7: 419. 2010. Syn. *Brassica juncea* (Linnaeus) Czernajew var. *gracilis* M. Tsen & S. H. Lee, Hortus Sinicus 2: 26. 1942 (Cruciferae).

Brown Mustard (芥菜), a species has greatest diversity in forms occurs in Asia, where it has been widely cultivated as a vegetable and as an oilseed crop. It is cultivated throughout China, sometimes

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** Author for correspondent; E-mail: jinshuangma@gmail.com

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作者简介: 寿海洋 (1983-) 男, 硕士, 主要从事植物分类学、植物资源学、植物生殖生物学方面的研究。E-mail: shouhy@126.com

naturalized especially in SW China, but was treated as *Brassica juncea* var. *gracilis* (Fan *et al.*, 2008). The species is an allotetraploid derived from hybridization between *B. nigra* ($n=8$) and *B. rapa* ($n=10$) (Warwick, 2010). Its origin is still unsure, either from Asia (Wagner *et al.*, 1999), or possibly from Africa, even from the Middle East (Smith, 1981).

3. *Bryophyllum delagoense* (Ecklon & Zeyher) Schinz, Mém. Herb. Boissier **10**: 38. 1900; Reid V. Moran, Fl. N. Amer. **8**: 160. 2009. Basionym *Kalanchoe delagoensis* Ecklon & Zeyher, Enum. Pl. Afr. Austral. 305. 1837. Syn. *Bryophyllum verticillatum* (Scott-Elliot) A. Berger, Nat. Pflanzenfam. (ed. 2) **18a**: 411. 1930; *Kalanchoe tubiflora* Raymond-Hamet, Beih. Bot. Centralbl. **29** (2): 41. 1912; *K. verticillata* Scott-Elliot, J. Linn. Soc., Bot. **29** (197): 14–15, pl. 3. 1891 (Crassulaceae).

Chandelier Plant (洋吊钟), native to Madagascar, introduced to North America, Indian Ocean Islands, Africa, Pacific Islands, and Australia. This prolific species is an aggressive weed in Australia, and it is called “mother of millions” and a serious weed because it is highly poisonous to cattle. In China, it is reported in Anhui (Wang *et al.*, 2007), Guangdong (Zeng *et al.*, 2009), cultivated all over the country, naturalized and spread in some areas (Xie, 2008). The names of *Bryophyllum tubiflorum* and *Kalanchoe tubiflora* are widely used in horticultural as well as botanical works in China, with *K. delagoensis* usually listed in synonymy as a nomen nudum (Moran, 2009).

4. *Chamaecrista mimosoides* (Linnaeus) Greene, Pittonia **4** (20D): 27. 1899; D. Z. Chen, D. X. Zhang & Kai Larsen in Fl. Chin. **10**: 33. 2010. Basionym *Cassia mimosoides* Linnaeus, Sp. Pl. **1**: 379. 1753 (Leguminosae).

Chamaecrista (山扁豆), native to tropical America, widely introduced in the tropics and subtropics, is a drought-enduring and barren-resistant

plant, grown for improving the soil. The roots are used medicinally for treating dysentery. In most literatures, it's widely treated as *Cassia mimosoides* (Wang *et al.*, 2004; Yan *et al.*, 2004; Chen, 2005; Ding *et al.*, 2006; Shan *et al.*, 2006; Wei *et al.*, 2006; Wang *et al.*, 2007; Xie *et al.*, 2007; Zhao, 2007; Jiang *et al.*, 2008; Ji *et al.*, 2009; Wang, 2010). It's distributed in China: Anhui, Beijing, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Hong Kong, Hainan, Heilbei, Hunan, Jiangsu, Jiangxi, Macao, Sichuan, Shandong, Taiwan, and Yunnan.

5. *Crotalaria trichotoma* Bojer, Ann. Sci. Nat., Bot., sér. 2, **4**: 265–266. 1835; J. Q. Li, H. Sun, Roger M. Polhill & Michael G. Gilbert in Fl. Chin. **10**: 109. 2010. Syn. *Crotalaria zanzibarica* Benth, London J. Bot. **2**: 584. 1843 (Leguminosae).

West Indian Rattlebox (光萼猪屎豆), species native to E Africa, was introduced in Australia, Indonesia, Malaysia, Philippines, Sri Lanka, Vietnam and China: Fujian, Guangdong, Guangxi, Hainan, Hunan, Sichuan, Taiwan and Yunnan. It's often treated as *Crotalaria zanzibarica*, especially in the Chinese invasive literatures (Xie *et al.*, 2007; Fan *et al.*, 2008).

6. *Cuphea carthagenensis* (Jacquin) James Francis Macbride, Publ. Field Mus. Nat. Hist., Bot. Ser. **8** (2): 124. 1930; H. N. Qin, Shirley Graham & Michael G. Gilbert in Fl. Chin. **13**: 274, 2007. Syn. *Cuphea balsamona* Chamisso & Schlechtendal, Linnaeus **2** (3): 363. 1827 (Lythraceae).

Colombian Waxweed (香膏萼距花), species native to tropical America (Smith, 1985), naturalized in tropics, sometimes abundant weed in gardens, plantations, open fields, along roadsides and forest trails, in open places on ridges and crests, and introduced to China as ornamental, naturalized in Guangdong, but was treated as *Cuphea balsamona* (He and Huang, 2004; Zeng *et al.*, 2009).

7. *Cyclospermum leptophyllum* (Persoon) Sprague ex Britton & Percy Wilson, *Sci. Surv. Proto Rico & Virgin Islands* **6**: 52. 1925; M. L. She & Mark F. Watson in *Fl. Chin.* **14**: 114–115. 2005. Syn. *Apium leptophyllum* (Persoon) Ferdinand Müller ex Benthām, *Fl. Austral.* **3**: 372–373. 1866 (Umbelliferae).

Marsh Parsley (细叶旱芹), a species native to South America, widely naturalized as a weed in tropical and temperate regions, but treated as *Apium leptophyllum* (Guo and Li, 1995; Hu *et al.*, 2005; Xie, 2008). It distributed in China: Anhui, Chongqing, Fujian, Guangdong, Guangxi, Hebei, Hubei, Hong Kong, Hainan, Hunan, Jiangsu, Shanghai, Shandong, Taiwan, Yunnan, and Zhejiang. In addition, one literature (Xu *et al.*, 2009) reported *Chaerophyllum villosum*, possibly because the similar Chinese name: xi ye qin (细叶芹), but this species is native to China, distributed in SW Sichuan, S Xizang, and NW Yunnan, also in Afghanistan, Bhutan, N India, Kashmir, Nepal and Pakistan. *Oenanthe sinensis*, synonym of *Oenanthe linearis* subsp. *linearis*, was also misused to this species (Lin *et al.*, 2007), but it is native to Chongqing, Guizhou, Hubei, Sichuan, Taiwan, Xizang, and Yunnan (Pu and Watson, 2005).

8. *Cyperus involucratus* Rottbøll, *Descr. Pl. Rar.* **22**. 1772; Gordon C. Tucker, Brian G. Marcks & J. Richard Carter in *Fl. N. Amer.* **23**: 150. 2003. Syn. *Cyperus alternifolius* Linnaeus subsp. *flabelliformis* Kükenthal, *Pflanzenr.* **4** (20, Heft 101): 193. 1936 (Cyperaceae).

Umbrella Plant (风车草), native to E Africa and SW Asia, is widely cultivated as a water plant in greenhouses and outdoor in warm-temperate or tropical climates. It's also cultivated as an ornamental in China, sometimes escaped and naturalized along streams and in wet thickets and disturbed areas in Guangdong, Hunan, and Taiwan, but treated as *Cyperus alternifolius* subsp. *flabelliformis* (Fan *et al.*, 2008; Zeng *et al.*, 2009).

9. *Gynandropsis gynandra* (Linnaeus) Briquet, *Annuaire Conserv. Jard. Bot. Genève* **17**: 382–383. 1914; M. L. Zhang & Gordon C. Tucker in *Fl. Chin.* **7**: 432. 2008. Basionym *Cleome gynandra* Linnaeus, *Sp. Pl.* **1**: 671. 1753 (Capparidaceae).

Siderwisp (羊角菜), a species widely distributed in Bhutan, India, Indonesia, Malaysia, Nepal, Sri Lanka, Thailand, Vietnam, and tropical Africa, introduced in Central, S North, and South America. It's widely distributed in China from Hainan to Beijing, and from Yunnan to Taiwan (Sun, 1999). This species is often grown as an ornamental and cultivated as a potherb and also used medicinally, but treated as *Cleome gynandra* (Xie *et al.*, 2007).

10. *Eruca vesicaria* (Linnaeus) Cavanilles subsp. *sativa* (Miller) Thellung, *Ill. Fl. Mitt.-Eur.* **4** (1): 201. 1918; T. Y. Zhou, L. L. Lu, G. Yang & Ihsan A. Al-Shehbaz in *Fl. Chin.* **8**: 27. 2001. Basionym *Eruca sativa* Miller, *Gard. Dict.*, ed. 8, *Eruca* no. 1. 1768 (Cruciferae).

Rocketsalad (芝麻菜), widely cultivated in Asia, NW Africa, Europe, and N America, is a naturalized weed worldwide. It's cultivated in China: Beijing, Gansu, Hebei, Heilongjiang, Jiangsu, Liaoning, Nei Mongol, Qinghai, Shaanxi, Shanxi, Sichuan, and Xinjiang, but treated it as *Eruca sativa* (Liu *et al.*, 2002; Soyolt *et al.*, 2007). It's widely cultivated in Asia for seed oil, which is used as an illuminant, lubricant, and for pickling; while in Europe and North America as a salad plant. The young plants are medicinal and used as a stimulant, anti-scorbutic, stomachic, and diuretic.

11. *Hippobroma longiflora* (Linnaeus) George Don, *Gen. Hist.* **3**: 717. 1834; D. Y. Hong, Laura L. Klein & Thomas G. Lammers in *Fl. Chin.* **19**: 563. 2011. Syn. *Laurentia longiflora* (Linnaeus) Petermann, *Pflanzenreich* **444**. 1845 (Campanulaceae).

Madamfate (马醉草), native to West Indies,

now pan-tropical, wildy introduced and naturalized in tropics and subtropics. It is found in China: Guangdong, Hong Kong, and Taiwan, but treated as *Laurentia longiflora* (Zeng *et al.*, 2009). The sap of plant is an irritant which can be absorbed through the skin, and a small amount of sap in the eyes can cause blindness (Baldwin, 1979).

12. *Melastoma malabathricum* Linnaeus, Sp. Pl. **1**: 390. 1753; J. Chen & Susanne S. Renner in Fl. Chin. **13**: 365. 2007. Syn. *Melastoma candidum* David Don, Mem. Wern. Nat. Hist. Soc. **4**: 288. 1823 (Onagraceae).

Malabar Metastome (野牡丹), native to Cambodia, India, Japan, Laos, Malaysia, Myanmar, Nepal, Philippines, Thailand, Vietnam and China: Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangxi, Sichuan, Taiwan, SE Xizang, Yunnan, and Zhejiang; but treated as *Melastoma candidum* (An *et al.*, 2007; Zhou, 2011).

13. *Mimosa diplotricha* Charles Wright ex Sauvalle, Anales Acad. Ci. Med. Habana **5**: 405. 1868; D. L. Wu & Ivan C. Nielsen in Fl. Chin. **10**: 54. 2010. Syn. *Mimosa invisa* Martius ex Colla, Herb. Pedem. **2**: 255. 1834 (Leguminosae).

Giant Sensitive Plant (巴西含羞草), a species native to tropical America, introduced throughout the tropics; and cultivated or naturalized in China: Fujian, Guangdong, Hainan, Hong Kong, Taiwan and Yunnan, but treated as *Mimosa invisa* (Yan *et al.*, 2004; An *et al.*, 2007; Fan *et al.*, 2008; Qin *et al.*, 2008; Xie, 2008; Zhang and Xing, 2011). It is a very invasive species wherever introduced (Smith, 2002), on noxious weed list of US and Hawaii as well, and declared as noxious weed in Fiji and Australia (Queensland, Northern Territory, and Western Australia).

14. *Oxalis corymbosa* de Candolle, Prodr. **1**: 696. 1824; Q. R. Liu & Mark F. Watson in Fl. Chin. **11**: 4. 2008. Syn. *Oxalis debilis* Kunth var. *corym-*

bosa (de Candolle) Lourteig, Ann. Missouri Bot. Gard. **67** (4): 840. 1980; *Oxalis martiana* Zuccarini, Denkschr. Königl. Akad. Wiss. München **9**: 144–145. 1825 (Oxalidaceae).

Pink Woodsorrel (红花酢浆草), native to tropical South America, cultivated as an ornamental and naturalized in warm temperate areas in many parts of the world. In China, it is cultivated and also escaped as a common weed of cultivated grounds and open habitats in Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Yunnan, and Zhejiang. However, it's also treated as *Oxalis debilis* var. *corymbosa* (Wang *et al.*, 2008, 2009) and *Oxalis martiana* (Chen, 2008).

15. *Peperomia pellucida* (Linnaeus) Kunth, Nov. Gen. Sp. (quarto ed.) **1**: 64. 1815; Y. Q. Cheng, N. H. Xia & Michael G. Gilbert in Fl. Chin. **4**: 130. 2003. Syn. *Piper pellucidum* Linnaeus, Sp. Pl. **1**: 30. 1753 (Piperaceae).

Man to Man (草胡椒), native to tropical America, but now widely cultivated and naturalized throughout the tropics. It's sometimes a weed of cultivation, and found in China: Anhui, Beijing, Fujian, Guangdong, Guangxi, Hainan, Hong Kong, Hunan, Jiangsu, Macao, Taiwan, Yunnan, and Zhejiang, but treated as *Piper pellucidum* (Yan *et al.*, 2004).

16. *Smallanthus uvedalia* (Linnaeus) Mackenzie, Man. S. E. Fl. 1406, 1509. 1933; John L. Strother in Fl. N. Amer. **21**: 34. 2006. Syn. *Polymnia uvedalia* (Linnaeus) Linnaeus, Sp. Pl. (ed. 2) **2**: 1303. 1763 (Compositae).

Yellow-flowered Leaf-cup (包果菊), native to Central and North America, is primarily a weed of pastures, hay fields, hedgerows and roadsides in N America, introduced and naturalized in China: Anhui, Jiangsu, Shanghai and Zhejiang, but treated as *Polymnia uvedalia* (Guo and Li, 1995; Chen *et al.*, 2003; Zang *et al.*, 2006).

17. *Talinum paniculatum* (Jacquin) Gaertner, Fruct. Sem. Pl. **2**: 219. 1791; D. Q. Lu & Michael G. Gilber in Fl. Chin. **5**: 444. 2003. Syn. *Talinum patens* (Linnaeus) Willdenow, Sp. Pl. **2** (2): 863. 1799 (Portulacaceae).

Jewels of Opar (土人參), a species native to tropical America, cultivated and naturalized throughout SE Asia. It's cultivated and escapes to shaded wet places in Central and Southern China: Anhui, Chongqing, Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hong Kong, Hainan, Hunan, Hebei, Jiangsu, Jiangxi, Macao, Sichuan, Shandong, Shanxi, Yunnan, and Zhejiang. It's been also treated as *Talinum patens* (Zhao, 2007; Shi *et al.*, 2009). The record of *Talinum portulacifolium* was from Yunnan (Ding *et al.*, 2006; Guan *et al.*, 2006) needs further study.

18. *Vaccaria hispanica* (Miller) Rauschert, Wiss. Z. Martin-Luther-Univ. Halle-Wittenberg, Math.-Naturwiss. Reihe **14**: 496. 1965; D. Q. Lu, Magnus Lidén & Bengt Oxelman in Fl. Chin. **6**: 102. 2001. Syn. *Vaccaria segetalis* (Necker) Garcke ex Ascherson, Fl. Brandenburg **1**: 84. 1864 (Caryophyllaceae).

Cow Soapwort (麦蓝菜), species native to Asia and Europe; but in Chinese literatures, it's widely treated as *Vaccaria hispanica* (Tang, 1996; Xu and Qiang, 2004; Xie, 2008). It is weed in wheat field while widely cultivating for medicinal seed in China: Anhui, Gansu, Guizhou, Hebei, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanghai, Shanxi, Taiwan, Xinjiang, Xizang, and Yunnan.

19. *Xanthium strumarium* Linnaeus, Sp. Pl. **2**: 987. 1753; Y. S. Chen & D. J. Nicholas Hind in Fl. Chin. **21**: 1491. 2011. Syn. *Xanthium italicum* Moretti, Giorn. Fis., ser. 2, **5**: 326. 1822; *X.*

mongolicum Kitagawa, Rep. First Sci. Exped. Manchoukuo **4**: f. 97. 1936; *X. sibiricum* Patr. ex Widder, Repert. Spec. Nov. Regini Veg. Beih. **20**: 32–38, pl. 1, f. 6–8. 1923; *X. strumarium* Linnaeus var. *glabratum* (de Candolle) Cronquist, Rhodora **47** (564): 403. 1945 (Compositae).

Rough Cocklebur (苍耳), probably native to the New World, now a cosmopolitan weed (Wagner *et al.*, 1999), common in low elevation, relatively dry, disturbed habitats, distributes all over China, also in Cambodia, India, Japan, Korea, Laos, Mongolia, Russia, Thailand, and Vietnam; SW Asia, N America. *X. italicum* (Liu *et al.*, 2002; Chen *et al.*, 2008; Lin *et al.*, 2009; Yang *et al.*, 2009), *X. mongolicum* (Qu *et al.*, 2010), *X. sibiricum* (Chen, 1979; Wang *et al.*, 2007; Yang *et al.*, 2009, 2011), were treated as synonym of *X. strumarium* in FOC, while the study shows that the fruits, seeds, phyllaries and androeciums of *X. italicum*, *X. mongolicum*, *X. sibiricum* and *X. spinosum* are different from each other, these four species are well separated and should be accepted as different species according to recent study^①.

20. *Sorghum halepense* (Linnaeus) Persoon, Syn. Pl. **1**: 101. 1805; S. L. Chen & Sylvia M. Phillips in Fl. Chin. **22**: 601. 2006. Syn. *Sorghum halepense* (Linnaeus) Persoon f. *muticum* (Hackel) Icon. Pl. **34**: t. 3364, p. 4. 1938 (Gramineae).

Johnsongrass (石茅), thought to have originated in the Mediterranean Region, but is now widely distributed as a serious weed in warm-temperate regions of the world: India, Kazakhstan, Kyrgyzstan, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, and Uzbekistan; SW Asia, S Europe. It's also introduced to China as a weed in fields: Anhui, Fujian, Guangdong, Hainan, Sichuan, Taiwan, and Yunnan. Some authors treated *Sorghum halepense* f. *muticum* as another species with Chinese name: ni

① 杜珍珠, 徐文斌, 阎平, 王少山, 2011. 新疆苍耳属 3 种外来入侵新植物 [J]. 2011 年全国系统与进化植物学暨第十届青年学术研讨会论文集. 云南省植物学会汇编, 121

mang jia gao liang 匿芒假高粱 (Li *et al.*, 2006; Chen, 2008; Zhang *et al.*, 2009), but it's only a synonym of *Sorghum halepense* (www.theplantlist.org).

Reference:

- An F (安锋), Kan LY (阚丽艳), Xie GS (谢贵水) *et al.*, 2007. Alien invasion plants in Hainan island and contral countermeasures [J]. *Journal of Northwest Forestry University* (西北林学院学报), **22** (5): 198—206
- Baldwin, Roger E, 1979. *Hawaii's Poisonous Plants* (1 ed.) [M]. Hawaii: The Petroglyph Press, Ltd., 26—27
- Chen HB (陈恒彬), 2005. The harmful exotic plants in Xiamen area [J]. *Subtropical Plant Science* (亚热带植物科学), **34** (1): 50—55
- Chen ML (陈明林), Zhang XP (张小平), Su DS (苏登山), 2003. A preliminary study on the invasive weeds in Anhui [J]. *Journal of Biology* (生物学杂志), **20** (6): 24—27
- Chen MS (陈模舜), 2008. Studies on flora composition and distribution characteristics of alien plants in Taizhou [J]. *Journal of Taizhou University* (台州学院学报), **30** (6): 43—48
- Chen QX (陈秋霞), Wei CQ (韦春强), Tang SC (唐赛春) *et al.*, 2008. The alien invasive plants in Guilin city, Guangxi Zhuangzu Autonomous region [J]. *Subtropical Plant Science* (亚热带植物科学), **37** (3): 55—58
- Chen YL (陈艺林), 1979. *Flora Reipublicae Popularis Sinicae* [M]. Beijing: Science Press, **75**: 325
- Ding L (丁莉), Du F (杜凡), Zhang DC (张大才), 2006. A study of alien invasive plant in Yunnan Province [J]. *Journal of West China Forestry Science* (西部林业科学), **35** (4): 98—103, 108
- Fan ZW (范志伟), Shen YD (沈奕德), Liu LZ (刘丽珍), 2008. List of invasive alien weeds in Hainan, China [J]. *Chinese Journal of Tropical Crops* (热带作物学报), **29** (6): 781—792
- Guan ZB (管志斌), Deng WH (邓文华), Huang ZL (黄志玲) *et al.*, 2006. A preliminary investigation on the alien invasive plants in Xishuangbanna [J]. *Tropical Agricultural Science & Technology* (热带农业科技), **29** (4): 35—38
- Guo SL (郭水良), Li YH (李扬汉), 1995. A preliminary study on alien weeds in southeastern China [J]. *Weed Science* (杂草科学), **2**: 4—8
- He WQ (贺握彬), Huang ZL (黄忠良), 2004. Dynamics and impacts of invasion by nonnative plant species to Dinghushan nature reserve [J]. *Guangdong Forestry Science and Technology* (广东林业科技), **20** (3): 42—45
- Hu G (胡刚), Zhang ZH (张忠华), Dong JT (董金廷) *et al.*, 2005. A preliminary study on the alien invasive plants in Huai-bei region of Anhui province [J]. *Journal of Hefei University* (Natural Sciences) (合肥学院学报(自然科学版)), **15** (2): 41—45
- Ji CF (季春峰), Wang Z (王智), Qian P (钱萍), 2009. Primary research on invasive plants in Jiangxi province [J]. *Hubei Forestry Science and Technology* (湖北林业科技), **3**: 27—31
- Jiang QC (蒋谦才), Lin ZM (林正眉), Li L (李荔) *et al.*, 2008. An investigation on the invasive plants in Zhongshan, Guangdong Province [J]. *Guangdong Forestry Science and Technology* (广东林业科技), **24** (2): 54—58
- Li GY (李根有), Jin SH (金水虎), Ai JG (袁建国), 2006. Species, Characteristics in injurious plants in and control measures of Zhejiang Province [J]. *Journal of Zhejiang Forestry College* (浙江林学院学报), **23** (6): 614—624.
- Lin MX (林茂祥), Han F (韩凤), Liu ZY (刘正宇) *et al.*, 2007. A preliminary study on alien invasive plants of Jinfo Mountain [J]. *Weed Science* (杂草科学), **4**: 26—28
- Liu QR (刘全儒), Yu M (于明), Zhou YL (周云龙), 2002. A preliminary study on the invasive plants in Beijing [J]. *Journal of Beijing Normal University* (Natural Science) (北京师范大学学报(自然科学版)), **38** (3): 399—404
- Lin QW (林秦文), Xing SH (邢韶华), Ma K (马坤), 2009. New materials of alien plants in Beijing [J]. *Journal of Beijing University of Agriculture* (北京农学院学报), **24** (4): 42—44
- Moran, Reid V, 2009. *Flora of North America* [M]. Oxford: Oxford University Press, **8**: 160
- Ng SC (吴世捷), Richard C (高力行), 2002. The bad biodiversity: alien plant species in Hong Kong [J]. *Biodiversity Science* (生物多样性), **10** (1): 109—118
- Pu FD (溥发鼎), Mark. F. Watson, 2005. *Flora of China* [M]. Beijing: Science Press, **14**: 132
- Qin XS (秦新生), Zhang RJ (张荣京), Chen HF (陈红锋) *et al.*, 2008. Alien plants in limestone regions of Hainan Island, China [J]. *Chinese Journal of Ecology* (生态学杂志), **27** (11): 1861—1868
- Qu B (曲波), Zhang W (张微), Zhai Q (翟强) *et al.*, 2010. Preliminary analysis on invasive species in Liaoning Province [J]. *Pratacultural Science* (草业科学), **27** (9): 38—44
- Shan JL (单家林), Yang FC (杨逢春), Zheng XQ (郑学勤), 2006. Exotic plants in Hainan province [J]. *Subtropical Plant Science* (亚热带植物科学), **35** (3): 39—44
- Shi LC (石亮成), Shi G (石钢), Yi QL (易巧玲) *et al.*, 2009. The countermeasure research for investigation and eradication of alien invasive plant in Liuzhou [J]. *Journal of Guangxi Academy of Sciences* (广西科学院学报), **25** (3): 178—182
- Smith AC, 1981. *Flora Vitiensis Nova: A New Flora of Fiji, Lawaii* [M]. Hawaii: Pacific Botanical Garden, **2**: 705—706
- Smith AC, 1985. *Flora Vitiensis Nova: A New Flora of Fiji. Lawaii* [M]. Hawaii: National Tropical Botanical Garden, **3**: 283
- Smith NM, 2002. *Weeds of the Wet/dry Tropicals of Australia: A Field Guide* [M]. Darwin City: Environment Centre NT, Inc. 34—35
- Soyolt (苏亚拉图), Jin F (金凤), Khasbagan (哈斯巴根), 2007. A preliminary study on the invasive plants in Inner Mongo-

- lia [J]. *Journal of Inner Mongolia Normal University* (Natural Science Edition) (内蒙古学报 (自然科学版)), **36** (4): 480—483
- Sun BX (孙必兴), 1999. *Flora Reipublicae Popularis Sinicae* [M]. Beijing: Science Press, **32**: 533
- Tang CL (唐昌林), 1996. *Flora Reipublicae Popularis Sinicae* [M]. Beijing: Science Press, **26**: 405
- Wang F (王芳), Wang RJ (王瑞江), Zhuang PD (庄平弟) *et al.*, 2009. Present status and management strategies of alien invasive plants in Guangdong Province [J]. *Chinese Journal of Ecology* (生物学报), **28** (10): 2088—2093
- Wang FG (王发国), Xing FW (邢福武), Ye HG (叶华谷) *et al.*, 2004. Preliminary study on invasive species in Macau [J]. *Acta Scientiarum Naturalium Universitatis Sunyatseni* (中山大学学报 (自然科学版)), **43** (Suppl.): 106—110
- Wang N (王宁), 2010. Study on the invasiveness and clonality of invasive alien plant in Jiangxi province [J]. *Journal of Jinggangshan University* (Natural Science) (井冈山大学学报 (自然科学版)), **31** (2): 108—112
- Wang W (王伟), Zhang XM (张先敏), Sha LH (沙林华) *et al.*, 2007. Roster of alien invasive perilous species of animals and plants in Hainan island (I) [J]. *Chinese Journal of Tropical Agriculture* (热带农业科学), **27** (4): 58—64
- Wang XF (汪小飞), Cheng YH (程轶宏), Zhao CH (赵恒恒) *et al.*, 2007. Studies on alien plants in Huangshan city [J]. *Journal of Jiangsu Forestry Science & Technology* (江苏林业科技), **34** (6): 23—27
- Wang Z (王忠), Dong SY (董仕勇), Luo YY (罗燕燕) *et al.*, 2008. Invasive plants in Guangzhou, China [J]. *Journal of Tropical and Subtropical Botany* (热带亚热带植物学报), **16** (1): 29—38
- Wagner, Warren L, Herbst, Derral R. & Sohmer SH, 1999. *Manual of the Flowering Plants of Hawaii* (Revised edition) [M]. Hawaii: University of Hawaii Press, 376—377, 400
- Warwick, Suzanne I, 2010. *Flora of North America* [M]. Oxford: Oxford University Press, **7**: 419
- Wei MY (韦美玉), Liu LP (刘丽萍), Wen ZR (文治瑞), 2006. Growth and control of exotic plant in Qiannan area of Guizhou [J]. *Guizhou Agricultural Sciences* (贵州农业科学), **34** (2): 35—38
- Xie Y (解焱), 2008. *Bioinvasion and Ecological Security in China* [M]. Shijiazhuang: Hebei Science and Technology Press, 337
- Xie YZ (谢云珍), Wang YB (王玉兵), Tan WF (谭伟福), 2007. Invasive plants in Guangxi province [J]. *Journal of Tropical and Subtropical Botany* (热带亚热带植物学报), **15** (2): 160—167
- Xu HG (徐海根), Qiang S (强胜), 2004. *Inventory Invasive Alien Species in China* [M]. Beijing: China Environmental Science Press, 134
- Xu L (徐亮), Chen GX (陈功锡), Zhang DG (张代贵) *et al.*, 2009. Investigation on alien invasive plants in Xiangxi of Hunan province, China [J]. *Journal of Jishou University* (Natural Science Edition) (吉首大学学报 (自然科学版)), **30** (1): 98—103
- Yan YH (严岳鸿), Xing FW (邢福武), Huang XX (黄向旭) *et al.*, 2004. Exotic plants in Shenzhen, China [J]. *Guihaia* (广西植物), **24** (3): 232—238
- Yang JC (杨景成), Wang GM (王光美), Jiang CD (姜闯道) *et al.*, 2009. Ecological characters and distribution of invasive plants under the influence of urbanization in Beijing, China [J]. *Ecology and Environmental Sciences* (生态环境学报), **18** (5): 1857—1862
- Yang D (杨德), Liu GH (刘光华), Xiao CM (肖长明) *et al.*, 2011. Identification and control of invasive agricultural plants in Chongqing [J]. *Acta Agriculturae Jiangxi* (江西农业学报), **23** (3): 93—95
- Zang M (臧敏), Qiu XL (邱筱兰), Huang LF (黄立发) *et al.*, 2006. Study on the alien plants in Anhui Province [J]. *Journal of Anhui Agricultural Science* (安徽农业科学), **34** (20): 5306—5308
- Zeng XF (曾宪锋), Lin XD (林晓单), Qiu HY (邱贺媛) *et al.*, 2009. Investigation on alien plants in E. Guangdong [J]. *Journal of Fujian Forestry Science and Technology* (福建林业科技), **36** (2): 174—179, 249
- Zhang MC (张明如), Zhang JG (张建国), Wang Y (王燕), 2009. A study of the prevention means and the situation of biological invasion in Zhejiang Province [J]. *Journal of Inner Mongolia Agricultural University* (Natural Science Edition) (内蒙古农业大学学报 (自然科学版)), **1**: 97—100
- Zhang RJ (张荣京), Xing FW (邢福武), 2011. The composition and origin of alien plants in Ganshiling nature reserve in Hainan, China [J]. *Guizhou Agricultural Sciences* (贵州农业科学), **39** (7): 31—33
- Zhao JM (赵见明), 2007. Study on the main exotic invasive plant species in Ruili, Yunnan [J]. *Journal of Southwest Forestry College* (西南林学院学报), **27** (1): 20—24
- Zhou ZG (周祖光), 2011. Analysis on invasive exotic species in Hainan Island [J]. *Journal of Anhui Agriculture Science* (安徽农业科学), **39** (13): 8072—8074