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A New Species of *Aspidistra* (Asparagaceae) from Guizhou, China

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An unknown species of *Aspidistra* Ker-Gawler (1822: 628) with freshly opened flowers and full ripe fruits was found when the writer was doing field study at Guiding country, Guizhou province in October, 2008. This species bloomed again in October, 2011 after being introduced to Guiyang College of Traditional Chinese Medicine, then was identified as a new species after studying relevant literature (Fang & Yu 2002, He 2002, Li & Tang 2002, Li & Wei 2003, Li 2004, Tillich 2005, 2006, Tillich *et al.* 2007, Tillich & Averyanov 2008, Lin *et al.* 2009, 2011, 2014, Hou *et al.* 2009, Xu *et al.* 2010a, 2010b, He *et al.* 2011a, 2011b, 2013, Gao *et al.* 2011, Hu *et al.* 2014, Vislobokov *et al.* 2014a, 2014b, Meng *et al.* 2014).

Description of the new species

Aspidistra pingfaensis S.Z.He & Q.W.Sun sp. nov. (Figs. 1, 2)

Type:—China, Guizhou province, Guiding Country, Pingfa Township, under the shrub beside the valley, elevation ca. 780 m, 3 October 2008, S.Z. He *et al.* 081003 (holotype, HGCM!).

Herbs perennial, rhizome creeping, subterete, 5–8 mm thick, covered with scales. Roots elongate. Leaf sheaths 3–5, purple-red, 5–12 cm, enclosing the base of leaves, fibrous when withered. Leaves solitary, 1.3–2.5 cm apart, leaf blade linear, 45–65 × 2–2.8 cm, apex gradually acuminate, base gradually narrowed into petiole, middle and upper margin sparsely thin denticulate, leaf blade slightly spotted with yellow-white; Petiole 8–26 cm. Peduncle 1.5–3.5 cm, bracts 3–4, broadly ovate, purple-red, 7–9 × 6–7 mm. Flower solitary, erect; Perigone campanulate, 1.5–1.7 cm tall and 1.2–1.6 cm across, 8-lobed, perigone tube 1.1–1.3 cm in length, 1.2–1.6 cm in diameter, yellowish-white outside, deep purple inside except the white base, lobes narrow triangular, 4–6 mm long and ca. 2 mm wide at base, purple inside and outside, somewhat outcurved; Stamens 8, inserted at ca. 4 mm above base of tube, filament ca. 0.8 mm in length, horizontally protruding, anthers oblong, ca. 1.6 × 1 mm, facing the ovary; Pistil 7–8 mm in length, ovary and style light yellow, ovary coniform and swelled obviously, diameter 4–5 mm, style gradually widened to stigma, stigma peltate, purple-red, ca. 8–9 mm in diameter, 8-lobed at margin, the center slightly concave with 4 whitish radiate bifurcating lines; pollen spherical, with verrucose ornamentation on the surface. Berry is subspherical, 1–1.4 cm high, 0.8–1.2 cm in diameter, with small spines. Flowering phase: October to November; Fruiting phase: September to October next year.

Distribution and Habitat:—The species grows under shrubs on valley slopes, at the height of 780–790 m. Distributed in Pingfa Township, Guiding Country, Guizhou province, China.

Additional specimen examined (paratype):—Pingfa Township, Guiding Country, Guizhou Province, China, 3 October 2008, S.Z. He *et al.* 081002 (HGCM!).

Taxonomic relationships:—The new species is similar to *Aspidistra fasciaria* Li (1999: 484), *Aspidistra ebianensis* Lang & Zhu (1999: 492), *Aspidistra leyeensis* Wan & Huang (1987: 219). The major differences among these species, which are illustrated in Table 1, lie in the hairiness of the perigone tube, the location of stamens insertion, the shape of the ovary, and the upper surface characters of the stigma.

TABLE 1. Diagnostic characters distinguish *Aspidistra pingfaensis* from similar species.

Characters	<i>A. pingfaensis</i>	<i>A. fasciaria</i>	<i>A. ebianensis</i>	<i>A. leyeensis</i>
perigone	middle and base part light yellow, upper part purple-red	yellowish-green with purple spots	purple or purple-red	upper part purple, base part white
inside of the perigone tube	glabrous	papillate	papillate	papillate
stamens	inserted ca. 4 mm above base of tube	inserted near the base of tube	inserted at the base of tube	inserted ca. 4 mm above base of tube
ovary	coniform and swelled obviously	columned and slightly swelled	columned	columned and slightly swelled
upper surface of the stigma	slightly concave with 4 whitish radiate bifurcating lines, 8-lobed at margin	obviously convex with 3–4(5) deep crevices, 6–8(10) lobed at margin	slightly convex with 4 radiate ridges, 4-lobed at margin	4 hollows at center, 8-lobed at margin,

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References

- Fang, D. & Yu, L.Y. (2002) Three new species of *Aspidistra* Ker-Gawler (Liliaceae) from Guangxi, China. *Acta Phytotaxonomica Sinica* 40: 159–163.
- Gao, Q. & Liu, Y. (2011) *Aspidistra hezhouensis* (Ruscaceae s.l.), a new species from Guangxi, China. *Journal of Systematics and Evolution* 49: 506.
http://dx.doi.org/10.1111/j.1759-6831.2011.00159_2.x
- He, S.Z. (2002) A new species of *Aspidistra* Ker-Gawl. (Liliaceae) from Guizhou, China. *Acta Phytotaxonomica Sinica* 40: 377–379.
- He, S.Z., He, K. & Wu, J.Y. (2011a) A new species of *Aspidistra* (Ruscaceae) sp. nov. from Guizhou, China. *Annales Botanica Fennica* 48: 439–442.
<http://dx.doi.org/10.5735/085.048.0509>
- He, S.Z., Liu, A.L., Xu, W.F. & Sun, Q.W. (2013) *Aspidistra australis* (Ruscaceae), a new species from Guizhou, China. *Annales Botanica Fennica* 50: 305–308.
<http://dx.doi.org/10.5735/086.050.0502>
- He, S.Z., Xu, W.F. & Wang, Y.Y. (2011b) A new species of *Aspidistra* (Ruscaceae) from Guizhou, China. *Novon* 21: 187–189.
<http://dx.doi.org/10.3417/2009001>
- Hou, M.F., Liu, Y., Kono, Y.S.K. & Peng, C.I. (2009) *Aspidistra dixinensis* (Ruscaceae), a new species from limestone areas in Guangxi, China. *Botanical Studies* 50: 371–378.
- Hu, R.C., Shen, X.L., Liu, J. & Lin, C.R. (2014) *Aspidistra stenophylla* (Asparagaceae), a new species from Guangxi, China. *Phytotaxa* 170: 53–56.
<http://dx.doi.org/10.11646/phytotaxa.170.1.8>
- Ker-Gawler, J.B. (1822) *Aspidistra lurida*. *Botanical Register* 8: 628.
- Lang, K.Y., Li, G.Z., Liu, Y., Wei, Y.G. & Wang, R.X. (1999) Taxonomic and phytogeographic studies on the genus *Aspidistra* Ker-Gawl. (Liliaceae) in China. *Acta Phytotaxonomica Sinica* 37: 468–508.
- Li, G.Z. & Tang, S.C. (2002) New taxa of *Aspidistra* Ker-Gawl. from Guangxi, China. *Guihaia* 22: 289–291.
- Li, G.Z. & Wei, Y.G. (2003) Two new species of the *Aspidistra* Ker-Gawl. (Liliaceae). *Acta Phytotaxonomica Sinica* 41: 381–386.
- Li, G.Z. (Ed.) (2004) *The Genus Aspidistra*. Guangxi Science & Technology Publishing House. Nanning, pp. 55–134.
- Lin, C.R., Guo, L.F. & Bin, Z.F. (2014) *Aspidistra lingyunensis* sp. nov. (Asparagaceae) from limestone areas in Guangxi, China. *Nordic*

- Journal of Botany* 32: 60–63.
<http://dx.doi.org/10.1111/j.1756-1051.2012.01608.x>
- Lin, C.R., Liang, Y.Y. & Liu, Y. (2009) *Aspidistra bamaensis* (Ruscaceae), a new species from Guangxi, China. *Annales Botanica Fennica* 46: 416–418.
<http://dx.doi.org/10.5735/085.046.0506>
- Lin, C.R. & Liu, Y. (2011) *Aspidistra punctatoides* sp. nov. (Ruscaceae) from limestone areas in Guangxi, China. *Nordic Journal of Botany* 29: 189–193.
<http://dx.doi.org/10.1111/j.1756-1051.2011.00858.x>
- Liu, A.L., He, S.Z., Xu, W.F. & Chen, S.L. (2012) Cytotaxonomy of the genus *Aspidistra* from Guizhou. *Plant Science Journal* 30: 1–7.
- Meng, T., Yang, J.C., Tang, W.X., Pan, B. & Lin, C.R. (2014) *Aspidistra tenuifolia* (Asparagaceae), a new species from China. *Phytotaxa* 161: 289–293.
<http://dx.doi.org/10.11646/phytotaxa.161.4.4>
- Tillich, H.J. (2005) A key for *Aspidistra*, including fifteen new species from Vietnam. *Feddes Repertorium* 116: 313–338.
<http://dx.doi.org/10.1002/fedr.200511076>
- Tillich, H.J. (2008) An update and improved determination key for *Aspidistra* Ker-Gawl. (Ruscaceae, Monocotyledons). *Feddes Repertorium* 119: 449–462.
<http://dx.doi.org/10.1002/fedr.200811174>
- Tillich, H.J. (2006) Four new species in *Aspidistra* Ker-Gawl. (Ruscaceae) from China, Vietnam and Japan. *Feddes Repertorium* 117: 139–145.
<http://dx.doi.org/10.1002/fedr.200511091>
- Tillich, H.J. & Averyanov, L.V. (2008) Two new species and one new subspecies of *Aspidistra* Ker-Gawler (Ruscaceae) from Vietnam. *Feddes Repertorium* 119: 37–41.
<http://dx.doi.org/10.1002/fedr.200711143>
- Tillich, H.J., Averyanov, L.V. & Dzu, N.V. (2007) Six new species of *Aspidistra* (Ruscaceae) from Northen Vietnam. *Blumea* 52(2): 335–344.
<http://dx.doi.org/10.3767/000651907X609070>
- Wan, Y. (1987) New species of the genus *Aspidistra* from Guangxi. *Guishaia* 7: 217–224.
- Vislobokov, N.A., Sokoloff, D., Degtyareva, G., Valiejo-Roman, C. & Kuznetsov, A. (2014a) *Aspidistra xuansonensis* (Asparagaceae), a new species from northern Vietnam. *Phytotaxa* 173: 226–234.
<http://dx.doi.org/10.11646/phytotaxa.173.3.5>
- Vislobokov, N.A., Sokoloff, D., Degtyareva, G., Valiejo-Roman, C., Kuznetsov, A.S. & Nuraliev, M. (2014b) *Aspidistra paucitepala* (Asparagaceae), a new species with occurrence of the lowest tepal number in flowers of Asparagales. *Phytotaxa* 161: 270–282.
<http://dx.doi.org/10.11646/phytotaxa.161.4.2>
- Xu, W.B., Huang, Y.S., Ye, X.X. & Liu, Y. (2010a) *Aspidistra connata* H.-J. Tillich, a newly recorded species of *Aspidistra* (Ruscaceae) from China. *Guishaia* 30: 613–615.
- Xu, W.F., He, S.Z. & Yang, L. (2010b) *Aspidistra chishuiensis* (Ruscaceae), a new species from Guizhou, China. *Annales Botanica Fennica* 47: 118–120.
<http://dx.doi.org/10.5735/085.047.0205>