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ARISTOLOCHIA HONDURENSIS (ARISTOLOCHIACEAE), A NEW SPECIES FROM HONDURAS

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Abstract. Jiménez, J. E.; O. Oyuela-Andino, J. H. Bonilla & M. A. Blanco. 2023. *Aristolochia hondurensis* (Aristolochiaceae), a new species from Honduras. *Darwiniana*, nueva serie 11(1): 31-42.

Aristolochia hondurensis, a new species of *Aristolochia* series *Hexandrae* subseries *Hexandrae*, endemic to Honduras, is described and illustrated. It is a species morphologically similar to *Aristolochia anguicida*, from which it is distinguished by its much larger flowers (in all dimensions) with an oblong, attenuate, erect perianth limb, perpendicular to the tube. Comments about its distribution, habitat, phenology, conservation status, and distinction from morphologically similar species, and a dichotomous key of the species present in Honduras belonging to the subseries *Hexandrae* are provided. The new species is known from only two populations and is not known to occur in any protected area; it is provisionally categorized as Critically Endangered (CR) according to IUCN Red List criteria. Previous reports of *A. inflata* for Honduras appear to be unsubstantiated by herbarium specimens.

Keywords. *Aristolochia* subseries *Hexandrae*; flora of Honduras; IUCN Red List categories; taxonomy.

Resumen. Jiménez, J. E.; O. Oyuela-Andino, J. H. Bonilla & M. A. Blanco. 2023. *Aristolochia hondurensis* (Aristolochiaceae), una nueva especie de Honduras. *Darwiniana*, nueva serie 11(1): 31-42.

Se describe e ilustra a *Aristolochia hondurensis*, una nueva especie endémica de Honduras, perteneciente a la serie *Hexandrae* subserie *Hexandrae*. Esta especie es morfológicamente similar a *Aristolochia anguicida*, de la cual se distingue por sus flores mucho más grandes (en todas sus dimensiones), con el limbo del perianto oblongo-atenuado y erecto, perpendicular al tubo. Se proporcionan comentarios sobre su distribución y hábitat, fenología, estado de conservación, observaciones taxonómicas, distinción con especies morfológicamente afines, y se proporciona una clave dicotómica de las especies presentes en Honduras que pertenecen a la subserie *Hexandrae*. La nueva especie se conoce solamente de dos poblaciones, ambas por fuera de áreas protegidas; provisionalmente se categoriza como en Peligro Crítico (CR) de acuerdo a los criterios de la Lista Roja de la UICN. Informes previos de *A. inflata* para Honduras aparentemente no tienen respaldo en especímenes de herbario.

Palabras clave. *Aristolochia* subseries *Hexandrae*; categorías de la Lista Roja de la UICN; flora de Honduras; taxonomía.

INTRODUCTION

Aristolochia L. consists of approximately 550 known species, widely distributed in the world, with a high diversity in tropical regions, especially in the Neotropics. They are mainly twining vines, but also shrubs and geophytic herbs, that grow in a wide variety of climates and ecosystems, from xerophytic environments to very humid forests. The flowers are epigynous, apetalous, protogynous and monosymmetrical; the perianth is formed by three sepals fused into a variously-shaped tubular structure, usually divided into three main portions (a proximal, inflated utricle, a middle tube, and a distal, flared limb, often adorned with various projections). The number of stamens [usually either 5 or 6, but up to 24 in the paleotropical subgenus *Pararistolochia* (Hutch. & Dalziel) O.C. Schmidt] almost always matches the number of carpels; the sessile anthers are adnate to the outer surface of the stigmatic lobes, forming a coroniform gynostemium. The fruits are septicidal capsules (González, 1990; González & Stevenson, 2002; Wanke et al., 2006; González & Pabón-Mora, 2017).

Despite the existence of two taxonomic treatments of the genus for the Mesoamerican region as a whole (Pfeifer, 1966; Barringer, 2015), the taxonomy of *Aristolochia* has never been studied thoroughly for Honduras. Pfeifer (1966) recorded seven species, while Barringer (2015) reported eight species as native in the country. In their unvouchered checklists of the Honduran flora, Molina (1975) indicated the presence of 13 species of *Aristolochia*, while Nelson-Sutherland (2008) indicated the presence of 16 species (13 native and three introduced). Thus, the exact number of *Aristolochia* species in Honduras remains unclear.

While studying specimens of *Aristolochia* in Honduran herbaria, a specimen was detected that, while resembling *A. anguicida* Jacq., has significant differences with that species. We were able to subsequently find plants in the field, and we proceed to describe and illustrate them here as a new species to science. A distribution map, comments about its distribution, habitat, phenology, preliminary conservation status, distinction from morphologically similar species, and a dichotomous key to the species of the subseries which the new species belong are provided.

MATERIAL AND METHODS

Fieldwork was carried out in 2021 during a botanical expedition in charge of the TEFH herbarium to document the vascular flora of Honduras. Herbarium specimens from Honduras deposited in CR, EAP, MO, and TEFH were physically examined. Type herbarium specimens of species names mentioned here were studied through digital images (JSTOR, <https://plants.jstor.org/>). Herbarium acronyms follow Thiers (2022). Flower measurements of the new species and related taxa were recorded from flowers at anthesis from both live plants and herbarium specimens; color and scent were recorded from live flowers at anthesis. Terminology mostly follows Pfeifer (1966) and Jiménez & Blanco (2020). Morphological characters used in Table 1 were compiled directly from specimens preserved in the CR, EAP, MO, and TEFH herbaria, complemented with live plants. Only herbarium specimens collected in Honduras of the species mentioned in this paper are listed.

The distribution map was prepared using QGIS version Girona 3.0 (QGIS Development Team, 2022). Habitat categories follow the Life Zone System of Holdridge (1967). The conservation assessments of the species follow the IUCN (2022) guidelines, considering the number of locations, criterion B1 (extent of occurrence, EOO), and criterion B2 (area of occupancy, AOO). The values for these criteria were calculated using the GeoCAT tool (Bachman et al., 2011), and the Rapid Least Concern web application (Bachman et al., 2020).

TAXONOMIC TREATMENT

Aristolochia hondurensis J.E. Jiménez & M.A. Blanco, **sp. nov.** TYPE: Honduras, Comayagua, Esquías, La Masica, bosque ripario y potreros contiguos al Río Grande del Agua Caliente, 14°41'50.0" N 87°16'34.9" W, 543 m a.s.l., 10-X-2021 (fl.), *O. Oyuela*, *J. Bonilla* & *J. E. Jiménez* 808 (holotype TEFH-51262! [2 parts, including flowers in liquid]; isotypes EAP, USJ). Figs. 1, 2 and 3.

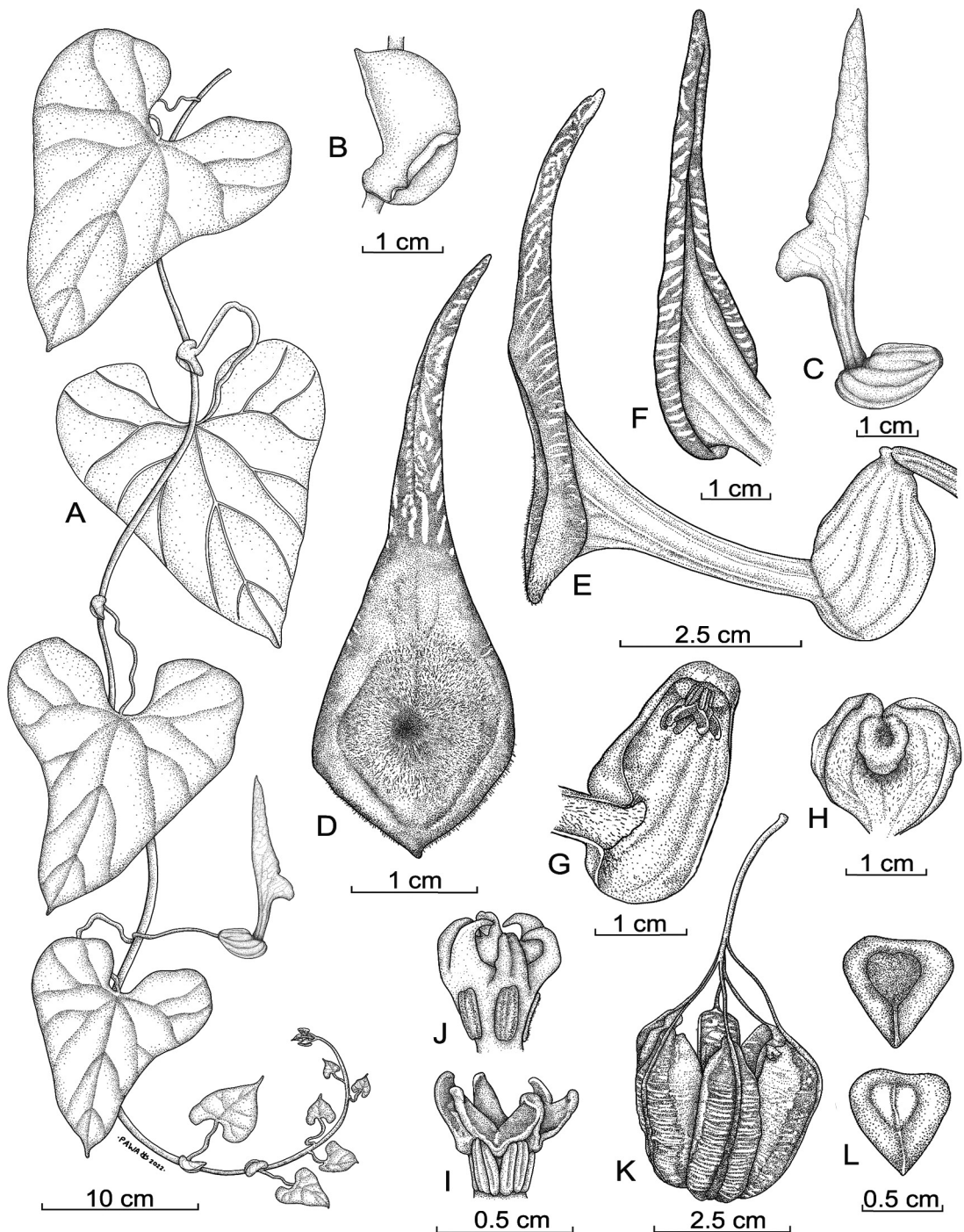


Fig. 1. *Aristolochia hondurensis*. **A**, habit. **B**, prophyll modified as pseudostipule. **C**, flower bud. **D**, flower in frontal view. **E**, flower in lateral view. **F**, detail of the revolute margin of the perianth limb. **G**, longitudinal section of the utricle showing the syrx and the gynostemium in the female phase. **H**, syrx in frontal view. **I**, gynostemium in the female phase (with the stigmatic surface exposed and anthers closed). **J**, gynostemium in male phase (with stigma closed and anthers dehiscent). **K**, capsule (dehiscent). **L**, seeds. Drawings based on live specimens of Oyuela *et al.* 808, 820 (TEFH).

Diagnosis. Similar to *Aristolochia anguicida* Jacq. by its ovate, cordate, acute leaf blades, presence of pseudostipules, and basifixed perianth limb with revolute margins, but differs from that species by its flowers about twice as large (utricle 2.3-2.7 vs. 0.8-1.2 cm, tube 2.5-3.4 vs. 1.0-2.0 cm, limb 4.6-6.5 vs. 1.5-3.2 cm), the fauces covered by white (vs. purple) trichomes, and the perianth limb oblong-attenuated (when its margins rolled at anthesis), erect and stretched away from the fauces, reddish brown with yellow stripes [vs. thinly cylindrical (when its margins rolled at anthesis), inflexed over the fauces, reddish brown proximally and reddish brown with yellow stripes medially and distally].

Description. Liana. Stems puberulous to glabrescent when young, with corky bark when mature. Prophylls modified as pseudostipules, sessile, suborbicular, amplexicaul, up to 3.0 × 3.2 cm, puberulous. Leaves marcescent, simple, alternate, distichous; petiole 4.6-7.0 cm; blade ovate, 12.1-16.6 × 9.5-13.4 cm, concolorous, cordate, the sinus 1.2-3.2 cm deep, apically acute, adaxial and abaxial surfaces puberulous to glabrescent when mature; venation palmate to pedate. Inflorescences axillary, emerging from young stems (in nodes with leaves still present), 1-flowered, ebracteate; pedicel plus ovary 9.0-10.3 cm, glabrous. Perigone geniculate, perpendicular to the axis of the pedicel/ovary, with an angle of 80-100° between utricle and tube, and 90-120° between the tube and limb, externally glabrous, light green with translucent veins, with fruity aroma during first day of anthesis; utricle ellipsoid, gibbous, 2.3-2.7 × 1.0-1.6 cm, the inner surface cream-colored, covered by brownish to dark-red trichomes; syrinx inequilateral, extending up to 0.4 cm into the utricle, cream-colored; tube cylindric, distally infundibuliform, 2.5-3.4 cm × 0.4-0.5 cm in diameter proximally × 1.8-2.1 cm in diameter distally, the inner surface cream-colored covered with white trichomes; fauces rounded, yellow with white trichomes; limb single-lobed, basifixed, erect, forming an angle of 90°-120° with the tube, oblong-attenuated with revolute margins, ovate-lanceolate when

flattened, 4.3-6.3 × 1.4-1.7 cm in its natural conformation at anthesis and 4.6-6.5 × 1.6-1.9 cm when flattened, lateral margins revolute at least 0.2-0.4 cm, glabrescent to glabrous, apex acuminate, lower margin (under fauces) obtuse, reddish brown with yellow stripes distally; appendix absent. Gynostemium coroniform, minutely stipitate, 0.6-0.7 × 0.3-0.5 cm; stipe 0.1-0.2 cm; stigmatic lobes 6, 0.3 cm, creamy-white; anthers 6, linear-oblong, 0.2 × 0.1 cm. Fruit an ellipsoid capsule, 3.2-3.9 × 1.7-2.5 cm, apex rostrate, with lateral dehiscence and entire septa; rostrum 0.1-0.3 cm. Seeds ovoid, 1-winged, 0.5-0.6 × 0.4-0.6 cm, brownish.

Etymology. The species is named after Honduras, the Central American country where it is endemic.

Distribution and habitat. Currently known from two localities in the central and northwestern parts of Honduras, specifically from La Masica (Esquías municipality, Comayagua department), and Guaruma Uno (San Manuel municipality, Cortés department), at elevations of ca. 540 and 70 m a.s.l., respectively (Fig. 4). *Aristolochia hondurensis* occurs in Tropical Dry Forest in plains and valleys, where the vines grow in secondary vegetation.

Phenology. Flowering has been documented in October and November. Fruiting has been documented in February (fruits were also seen, but not collected, in December and January).

Preliminary conservation status. *Aristolochia hondurensis* is a rare species known by three herbarium collections from only two sites located 110 km apart from each other. It is not known to occur in any protected areas. Due to its limited occurrence in less than five locations (EOO: 1361 km²; AOO: 8000 km²), and the agricultural, livestock, and urban expansion threatening the natural populations, *A. hondurensis* may be preliminarily considered Critically Endangered according to the IUCN Standards and Petitions Committee (2022) categories and criteria [CR A1(acd)23 C2a(i,ii)].



Fig. 2. *Aristolochia hondurensis*. **A**, branches showing both surfaces of the leaves. **B**, prophyll modified as pseudostipule. **C**, flower bud, close to anthesis. **D**, flower in oblique view. **E**, flower in frontal view. **F**, detail of the revolute margin of the perianth limb. **G**, flattened perianth limb. **H**, longitudinal section of the utericle showing the gynostemium in the female phase (with the stigmatic surface exposed and anthers closed). **I**, longitudinal section of the utericle showing the syrx and the gynostemium in the male phase (with stigma closed and anthers dehiscent). **J**, mature, dehiscent capsules. Photos by Josué Bonilla based on live specimens of Oyuela *et al.* 808, 820 (TEFH). Color version at <http://www.ojs.darwin.edu.ar/index.php/darwiniana/article/view/1090/1282>

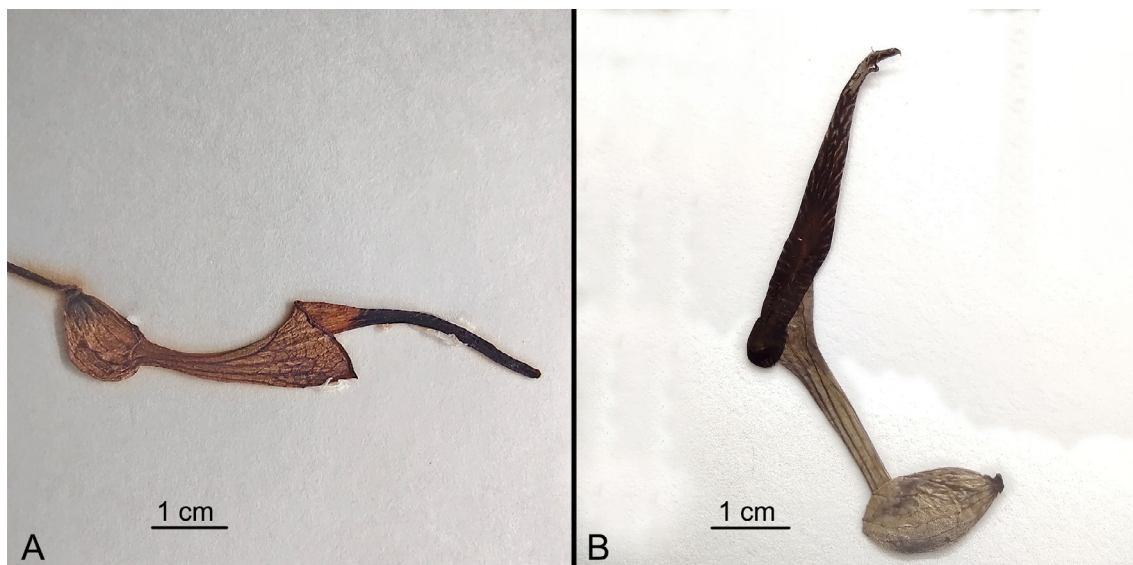


Fig. 3. Comparison of pressed, dry flowers of *Aristolochia anguicida* (A) and *A. hondurensis* (B). **A.**, based on Romero 270 (TEFH); **B.**, based on Oyuela *et al.* 808 (TEFH). Color version at <http://www.ojs.darwin.edu.ar/index.php/darwiniana/article/view/1090/1282>

Taxonomic observations. *Aristolochia hondurensis* belongs to *Aristolochia* subgenus *Aristolochia* series *Hexandrae* subseries *Hexandrae* because of its apparently solitary flowers usually without bracteoles (presumably a reduced racemose inflorescence), petioles without an abscission layer, fruits with entire septa, and seeds either rhomboid, ellipsoid, or ovoid, with a single wing (González, 1990). In Central America, the other members of subseries *Hexandrae* are *Aristolochia gorgona* M.A. Blanco, *A. grandiflora* Sw., and *A. pichinchensis* Pfeifer (all sensu Jiménez & Blanco, 2020), and *A. anguicida*, *A. inflata* Kunth, *A. odoratissima* L., *A. pilosa* Kunth, *A. ringens* Vahl, and *A. trilobata* L. (all sensu Barringer, 2015; Jiménez & Blanco, 2020). Of these, *A. anguicida*, *A. grandiflora*, *A. odoratissima*, *A. pilosa*, *A. ringens*, and *A. trilobata* occur naturally in Honduras (*A. inflata* has also been reported for Honduras, but its presence in the country has not been verified, see below).

A specimen of *Aristolochia hondurensis* (Dickson 3404, EAP), collected in 1972, spent almost five decades misidentified as *A. anguicida*, until its careful examination in 2019.

Vegetatively, both species are extremely similar, but their flowers are obviously different. Both species share ovate, cordate leaves, pseudostipules (stipule-like prophylls), and a basifixed perianth limb with revolute margins. Nevertheless, *Aristolochia hondurensis* differs from *A. anguicida* because of its much larger flowers (with longer utricle, tube and limb), and its different perianth limb (oblong-attenuated, erect, perpendicular to the tube, vs. thinly cylindrical, inflexed over the fauces [almost parallel to the tube], in *A. anguicida*) (Fig. 5). The shapes of the perianth limbs in both species are described above as they appear in their natural conformation at anthesis. When flattened, the limb of *A. hondurensis* is ovate-lanceolate (Fig. 2, G), while that of *A. anguicida* is oblong-attenuate. Both species grow sympatrically in the population at Esquías municipality, (Comayagua department), where *A. anguicida* is more abundant.

Aristolochia odoratissima, a species broadly distributed in the Neotropics (from Mexico to Argentina), can also be confused with *A. hondurensis* because of their superficial similarities. Both species share ovate, cordate

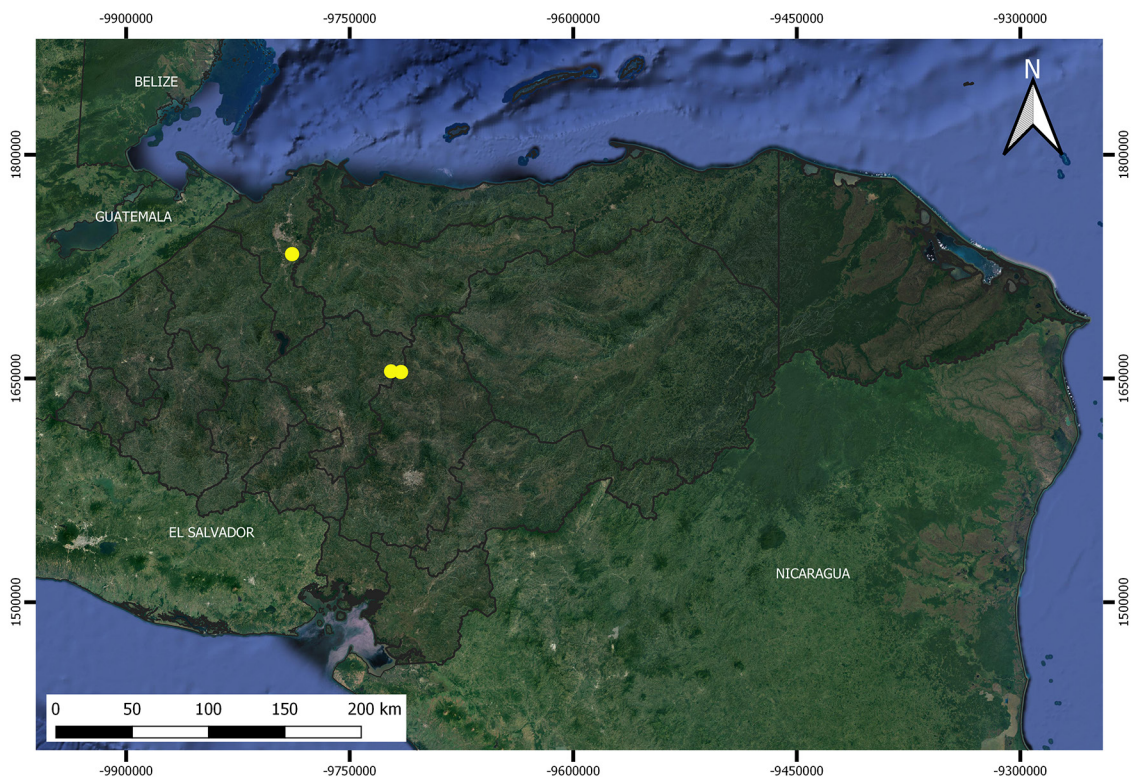


Fig. 4. Geographic distribution of *Aristolochia hondurensis* in Honduras, based on herbarium specimens. Color version at <http://www.ojs.darwin.edu.ar/index.php/darwiniana/article/view/1090/1282>

leaves (at least in climbing, flowering branches; the leaves of *A. odoratissima* can be very variable in shape; Jiménez & Blanco, 2020), pseudostipules, and flowers with a yellow area around the fauces. *Aristolochia odoratissima* differs from *A. hondurensis* because of its shorter perianth tube (1.4–2.5 vs. 2.5–3.4 cm, respectively), and the peltate and purple perianth limb (vs. basifixed and reddish brown with yellow stripes).

At first sight, *Aristolochia hondurensis* can appear somewhat intermediate between *A. anguicida* and *A. odoratissima*, and could conceivably be taken to represent a natural hybrid between those two species. However, the pedicel plus ovary, the utricle, and the tube of *A. hondurensis* are significantly longer and larger than those of either *A. anguicida* or *A. odoratissima* (Table 1). Also, if *A. hondurensis* was their hybrid, its fruits would be expected

to be intermediate in shape between those of *A. anguicida* and *A. odoratissima* (the fruits of the latter are narrowly cylindrical); however, the fruits of *A. hondurensis* are very similar to those of *A. anguicida*, only slightly larger (Table 1). Both *A. anguicida* and *A. odoratissima* are widespread in the Neotropics (the former from Mexico to Venezuela and the Lesser Antilles, and the latter from Mexico to Argentina and the Antilles), and no other plants similar to *A. hondurensis* have been documented in their regions of sympatry. Finally, while *A. anguicida* occurs sympatrically with *A. hondurensis* in Esquías, *A. odoratissima* was neither seen nor has it been collected at that locality (see examined specimens of *A. anguicida* and *A. odoratissima* from Honduras, below). Thus, we think it is improbable that *A. hondurensis* represents a natural hybrid between *A. anguicida* and *A. odoratissima*.

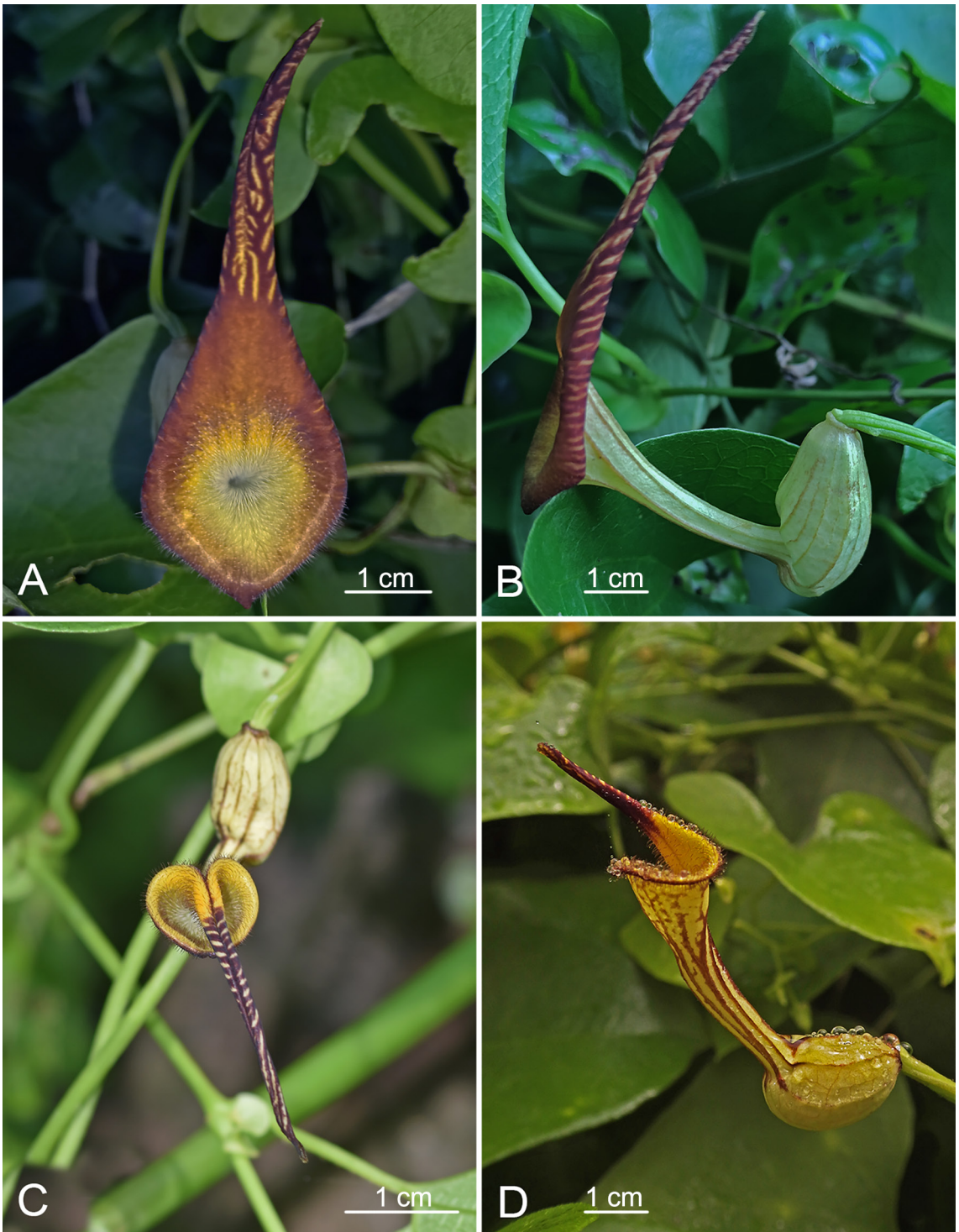


Fig. 5. Comparison of living flowers of *Aristolochia hondurensis* (A-B) and *A. anguicida* (C-D). A and B based on Oyuela *et al.* 808 (TEFH); C and D based on Jiménez *et al.* 5818 (TEFH). Color version at <http://www.ojs.darwin.edu.ar/index.php/darwiniana/article/view/1090/1282>

Likewise, *Aristolochia hondurensis* could conceivably be considered as a natural hybrid between *A. anguicida* and *A. inflata* (the latter distributed from Mexico to El Salvador and from Panama and Colombia). However, *A. hondurensis* has much longer pedicel-ovaries and a much larger perianth than both *A. anguicida* and *A. inflata* (Table 1). Even more significantly, although the presence of *A. inflata* in Honduras has been reported by several authors (e.g. Pfeifer, 1966; Molina, 1975; González, 1990; Nelson-Sutherland, 2008; González & Pabón-Mora, 2018; González & Monzón-Sierra, 2022), none of them cite any specimens of this species collected in Honduras, and we have not been able to locate any, despite searching in multiple herbaria.

The type of *Aristolochia loriflora* Mast., a synonym of *A. anguicida*, has flowers with limbs somewhat longer than average for the species. The flower buds present in some sheets of this collection (e.g., G, K) could be potentially confused with open flowers of *A. hondurensis*, because of their apparently erect limbs. However, the sheets at BM and US have open flowers that clearly show the thinly cylindrical limb inflexed over the fauces, diagnostic for *A. anguicida*, and nullifies the possibility of *A. loriflora* being an earlier name for *A. hondurensis*.

Additional specimens examined of *A. hondurensis*

HONDURAS. **Cortés**. Mun. La Lima, Guaruma I [Guaruma Uno], Section 38, [ca. 70 m a.s.l.], 1-XI-1972 (fl.), *J. D. Dickson* 3404 (EAP). **Comayagua**. Mun. Esquías, La Masica, bosque ripario y potreros contiguos al Río Grande del Agua Caliente, 14°41'50.0" N, 87°16'34.9" W, 543 m a.s.l., 15-II-2022 (fr.), *O. Oyuela, J. Bonilla & J. E. Jiménez* 820 (EAP, TEFH).

Examined specimens of *A. anguicida*

HONDURAS. **Choluteca**. Vicinity of Pespire, 160-200 m a.s.l., 18-27-X-1963, *P. C. Standley* 27071 (EAP). **Comayagua**. Agua Caliente, vaguada de Río Chamo y Humuya,

220 m a.s.l., 22-XI-1980, *C. Nelson et al.* 6422 (MO, TEFH); Agua Caliente, vaguada de Río Chamo y Humuya, 220 m a.s.l., 22-XI-1980 al 31- XII-1980, *C. Nelson et al.* 6282 (TEFH); Agua Caliente, vaguada de Río Chamo y Humuya, 220 m a.s.l., 22-XI-1980-31- XII-1980, *C. Nelson et al.* 6283 (MO, TEFH); Agua Caliente, vaguada de Río Chamo y Humuya, 220 m a.s.l., 22-XI-1980 al 31- XII-1980, *C. Nelson et al.* 6449 (TEFH); Mun. Esquías. La Masica, fragmentos de bosques muy intervenidos al lado del Río Grande, 543 m a.s.l., 14°41'45.20" N, 87°16'34.6" W, 14-VIII-2021, *J.E. Jiménez et al.* 5818 (TEFH), La Masica, fragmentos de bosques muy intervenidos al lado del Río Grande, 543 m a.s.l., 14°41'45.20" N, 87°16'34.6" W, 14-VIII-2021, *J.E. Jiménez et al.* 5819 (TEFH); La Conce, orilla del Río Sulaco, 150 m a.s.l., 18-II-1981, *C. Nelson et al.* 7618 (MO, TEFH); Las Flores, 15° 01' 15" N, 87° 36' 03" W, 658 m a.s.l., 22-IX-1981, *R. A. Meigs* 1792 (TEFH); Ojos de Agua, orilla del Río Humuya, 350 m a.s.l., 08-I-1981, *C. Nelson et al.* 7003 (MO, TEFH); Unión del Río Yure con Río Humuya, 200 m a.s.l., 22-XI-1980-31- XII-1980, *C. Nelson et al.* 6126 (MO, TEFH); Vado Alto, orilla del Río Sulaco, 150 m a.s.l., 18-II-1981, *C. Nelson et al.* 7682 (TEFH); Vado Alto, orilla del Río Sulaco, 150 m a.s.l., 18-II-1981, *C. Nelson et al.* 7694 (TEFH); ; Valle de Comayagua, 22-IX-1973, *D. Hazlett* 851 (EAP, MO). Valle de Comayagua, 12-IX-1973, *D. Hazlett* 852 (EAP); Vicinity of Comayagua, 600 m a.s.l., 12-23-III-1947, *P. C. Standley & J. Chacón* P. 5422 (EAP); Mun. Villa de San Antonio, 14° 20'46" N, 87° 37' 00" W, 600 m a.s.l., 17-III-1995, *J. L. Linares et al.* 2303 (EAP). **Cortés**. Carretera a la orilla de la cortina de la represa El Cajón, 14° 58' N 87° 44' W, 300 m a.s.l., 17-III-2000, *C. Nelson & C. Monroy* 20396 (TEFH); Ocote Arrancado, 600 m a.s.l., 1-30-XI-1980, *C. Nelson et al.* 5604 (TEFH); Ocote Arrancado, 600 m a.s.l., 1-30-XI-1980, *C. Nelson et al.* 5606 (MO, TEFH); Orilla del Río Humuya, 100 m a.s.l., 1-30-XI-1980, *C. Nelson et al.* 5800 (MO, TEFH); Orilla del Río Humuya, 100 m a.s.l., 1-30-XI-1980, *C. Nelson et al.* 5783 (TEFH).

El Paraíso. Jamastrán, Valle y Hacienda Quebrada Seca, 500 m a.s.l., 14-II-1967, *A. Molina 20316* (EAP); Vecindades de La Lodosa por el camino Hacia el Valle de Jamastrán, 900 m a.s.l., 10-X-1994, *J. L. Linares & R. L. Metsger 1786* (EAP); Vicinity of Danlí, 700-800 m a.s.l., 11-23-II-1949, *P. C. Standley 16454* (EAP). **Francisco Morazán.** Carretera a Danlí, 25-V-1975, *E. Vargas 86* (TEFH); Carretera a Danlí, El Zamorano, 25-V-1975, *M. Erazo 98* (MO); Chagüite road, 850 m a.s.l., 13-III-1947, *L. O. Williams & A. Molina 11893* (EAP, MO); Faldas de Cerro Majicarán, Río Yeguaré, 14° N, 87° W, 950 m a.s.l., 3-XI-1948, *A. Molina 1419* (EAP); Mun. Guaimaca, a orillas de Río Jala, 14° 30' 06.56" N 86° 33' 26.61" W, 658 m a.s.l., 10-X-2012, *N. Maradiaga 26* (TEFH); La Granja, along Río Choluteca near Tegucigalpa, 900 m a.s.l., 08-IX-1946, *A. Molina 10506* (EAP); Las Tapias, orilla del Río 914 m a.s.l., 01-XI-1986, *I. González 174* (TEFH). Open Meadows and roadsides southeast of El Zamorano, VIII-1960, *H. W. Pfeifer 1684* (MO); Mun. San Antonio de Oriente, 2 km. north of El Zamorano, VIII-1960, *H. W. Pfeifer 1660* (MO); Santa Inés, 850 m a.s.l., VIII-1943, *J. V. Rodríguez 449* (EAP); Mun. Tegucigalpa, El Tablón, 14° 1' N, 87° 9' W, 1020 m a.s.l., 30-X-1996, *P. J. Maas et al. 8458* (EAP, MO); Vicinity of El Zamorano, 800 m a.s.l., 1948, *P. C. Standley 13106* (EAP); Yeguaré River, 14° N, 87° W, 260 m a.s.l., 16-VII-1948, *S. F. Glassman 1921* (EAP); Yeguaré River, Zamorano, 800 m a.s.l., 26-VIII-1946, *L. O. Williams & A. Molina 10449* (EAP, MO); Zamorano, 800 m a.s.l., VIII-1944, *J. V. Rodríguez 64* (EAP). **La Paz.** Carretera a Lejamani, 01-X-1978, *E. Romero 270* (TEFH); Ciudad de La Paz, 500 m a.s.l., 08-IX-1979, *H. Galeano 65* (MO, TEFH); Mun. San Antonio del Norte, ejido El Chagüitón, 14° 04' 11.9" N, 87° 42' 16.9" W, 675 m a.s.l., 14-IV-2016, *O. P. Pineda 006* (TEFH); Vicinity of La Paz, 750 m a.s.l., 06-XII-1949, *P. C. Standley 24962* (EAP). **Olancho.** Along Río Olancho, W of main Tegucigalpa-Catacamas Highway, 14° 45' N, 86° 00' W, 400 m a.s.l., 04-II-1987, *T. B. Croat & D. P. Hannon 64077* (MG, MO); Mun. Catacamas, Río Catacamas al

E de Catacamas, 400 m a.s.l., 24-I-1988, *M. L. Palacios 274* (TEFH); Mun. Juticalpa, cañón del río Monumento Natural El Boquerón, 800 m a.s.l., 19-XI-1994, *J. L. Linares & J. López 1914* (EAP); Moist valley near Catacamas, 18-X-1969, *F. A. Barkley & J. Hourcade 39617* (MO, TEFH); Orilla del Río Catacamas, 400 m a.s.l., 01-V-1988, *L. Godoy 164* (TEFH); Orillas del Río Guayape, a 12 km, al SE del Campamento, 480-700 m a.s.l., 14-III-1986, *E. Villagrán 103* (MO); Palito Verde, 500-700 m a.s.l., 04-I-2015, *Cruz et al. 19* (TEFH); Río Juticalpa, 6 km a Juticalpa, 430 m a.s.l., 18-XI-1963, *A. Molina 13251* (EAP); Mun. Santa María del Real, 900 m a.s.l., 22-V-1988, *J. O. López 163* (TEFH); Vicinity of Catacamas, 450-500 m a.s.l., 18-26-III-1949, *P. C. Standley 18437* (EAP); Vicinity of Juticalpa, 380-480 m a.s.l., 6-16-III-1949, *P. C. Standley 17950* (EAP). **Santa Bárbara.** Llano del conejo, 1 km. de Santa Bárbara, 300 m a.s.l., 11-XII-1960, *A. Molina 3678* (EAP). **Valle.** Amapala, Isla del Tigre, 13° 17' N, 87° 39' W, 750 m a.s.l., 02-III-2002, *R. Reyes 205* (TEFH). Amapala, 10 m a.s.l., 11-IX-1945, *J. V. Rodríguez, 3410* (EAP). **Yoro.** Olanchito, comunidad Arenales, 15° 38' 33" N, 25° 23.0' 00" W, 225 m a.s.l., 10-VII-2017, *Ruiz et al. 476* (TEFH); Victoria, Orilla del Río Sulaco, 339 m a.s.l., 21-23-I-1981, *C. Nelson et al. 7059* (MO, TEFH); Victoria, Orilla del Río Sulaco, 339 m a.s.l., 21-23-I-1981, *C. Nelson et al. 7167* (MO, TEFH); Victoria, Orilla del Río Sulaco, 339 m a.s.l., 21-23-I-1981, *C. Nelson et al. 7180* (TEFH).

Examined specimens of *A. odoratissima*

HONDURAS. **Francisco Morazán.** Distrito Central, 14° 05' 06" N, 87° 09' 58" W, 1056 m a.s.l., 4-XII-2018, *J. Mejía-Paniagua 13* (TEFH). **Cortés.** Thicket, Campín Farm, 9-13-XII-1970, *J. D. Dickson 3030* (EAP). **Copán.** Copán River, 2 kms. East of Copán Ruinas, 500 m a.s.l., 23-XI-1969, *A. Molina & A. R. Molina 24787* (EAP, MO); Copán Ruinas, South Copán Ruinas, 600 m a.s.l., 26-VIII-1975, *A. Molina 30718* (EAP, MO). **Yoro.** El Progreso, camino a Río Pelo, 30 m a.s.l., 28-IX-1984, *C. Nelson 9060* (TEFH).

Table 1. Morphological comparison between *Aristolochia hondurensis* and the three most similar species present in (or reported from) Honduras.

CHARACTER	<i>A. anguicida</i>	<i>A. hondurensis</i>	<i>A. inflata</i>	<i>A. odoratissima</i>
Leaf blade length × width (cm)	7.1-15.2 × 5.3-12.1	12.1-16.6 × 9.5-13.4	6.5-11.1 × 4.5-7.5	7.0-12.5 × 5.1-9.1
Pedice+ovary length (cm)	4.0-7.1	9.0-10.3	2.0-3.2	3.8-4.5
Utricle length × width (cm)	0.8-1.2 × 0.4-0.8	2.3-2.7 × 1.0-1.6	0.8-1.8 × 0.7-1.1	2.4-2.7 × 1.0-1.6
Utricle and tube color (external)	Yellow to cream with purple veins	cream	White to light green	Light green to creamy-green
Tube length (cm)	1.1-2.1	2.5-3.4	0.5-1.0	1.4-2.5
Angle between tube and limb	0-50°	90-120°	50-90°	110-140°
Fauces trichome color	Purple	White	White	White
Perianth limb insertion	Basifixed	Basifixed	Subpeltate	Peltate
Perianth limb shape and orientation at anthesis	Thinly cylindrical, margins tightly revolute, inflexed over the fauces	Oblong-attenuated, margins revolute, ovate-lanceolate when flattened	Oblong-elliptic, margins laxly revolute	Oblong-elliptic, margins flat
Perianth limb length × width (cm) in its natural conformation at anthesis	1.5-3.2 × 0.5-1.3	4.3-6.3 × 1.4-1.7	2.6-3.5 × 2.1-3.0	8.2-11.5 × 4.5-5.6
Perianth limb color	Reddish brown proximally and reddish brown with yellow stripes medially and distally	Reddish brown with yellow stripes distally	Light greenish yellow, occasionally with purple veins	Purple with light-purple reticulate venation, with a central yellow spot
Fruit shape (before dehiscence)	Ellipsoid	Ellipsoid	Narrowly cylindrical, slightly falcate	Narrowly cylindrical, slightly falcate
Fruit length (cm)	2.5-3.5	3.2-3.9	3.1-4.2	5.5-9.2
Seed shape	Ovoid, 1-winged	Ovoid, 1-winged	Ovoid, not winged	Ovate, not winged

Key to the species of *Aristolochia* subseries *Hexandrae* in Honduras

1. Leaf blade trilobate, lateral lobes subequal to central lobe; utricle with 6 digitiform basal projections *A. trilobata*
1. Leaf blade entire, or if trilobate, the lateral lobes much shorter than the central lobe; utricle without basal projections 2
- 2(1). Leaf-blades reniform; perianth limb deeply and unequally bilobate *A. ringens*
2. Leaf-blades heart-shaped, subpanduriform, deltate or mainly ovate; perianth limb unilobate 3
- 3(1). Pseudostipules present 4
3. Pseudostipules absent 6
- 4(2). Perianth peltate with flat margins at anthesis, 8-11.5 cm; fruits 5.5-9.2 cm; seeds not winged *A. odoratissima*
4. Perianth basifixed with revolute margins at anthesis, 1.5-6.3 cm; fruits 2.5-3.9 cm; seeds winged 5
- 5(4). Utricle 2.3-2.7 cm; tube 2.5-3.4 cm; perianth limb oblong-attenuated (when its margins rolled at anthesis), 4.6-6.3 cm, erect and stretched away from the fauces, more or less perpendicular to tube, reddish brown with yellow stripes *A. hondurensis*
5. Utricle 0.8-1.2 cm; tube 1.1-2.1 cm; perianth limb narrowly cylindrical (when its margins rolled at anthesis), 1.5-3.2 cm, inflexed over the fauces, reddish brown proximally and reddish brown with yellow stripes medially and distally *A. anguicida*
- 6(3). Leaves, stems, and flowers glabrous to glabrescent; flowers pendent, ≥10 cm; perianth limb smooth without tentacles; appendix present, pendent, ≥10 cm *A. grandiflora*
6. Leaves, stems, and flowers hirsute-pilose; flowers patent, 5-6.5 cm; perianth limb covered by purple to black-purple tentacles; appendix absent *A. pilosa*

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