

† *Desmoncus mirandanus*, spec. nov. Fig. 76.

Glaber validus debiliter armatus scandens: folia longipinnata, petiolus et costa sparsis aculeis hamatis 4-10 mm. longis; pinnæ alternatæ, sparsæ vel oppositæ, 10-12 paribus vel jugis, lanceolato-ellipticæ, longiacuminatæ, circa 20 cm. longæ, 3-4 cm. latæ, laterales venæ longitudinales prominentes, interdum spinis paucissimis ad vel prope costam; hami terminales graciles, divaricati vel reflexi, 2-3 cm. longi: spatha longa angustaque, longiacuminata, 3-4 dm. longa, 2 cm. lata, dense breviaculeata: fructus brevi-oblongi, breviter acuminati, leves, circa 15 mm. longi et 10-11 mm. crassi, inermes; semen magnum, valde reticulatum.

Strong glabrous climber, not heavily armed, with many small weak divaricate spines 5-15 mm. long on stems or canes: leaves long-pinnate, petiole and midrib bearing scattered hooked prickles 4-10 mm. long; pinnæ alternate or scattered or sometimes opposite, 10 or a dozen pairs or doubles, lance-elliptic and taper-pointed, 20 cm. more or less long, about 3-4 cm. broad at middle or on some leaves only 1.5 cm. broad, lateral longitudinal veins prominent but secondary costæ absent, now and then a spinelet on midnerve or elsewhere but mostly nude; terminal hooks slender, divaricate or reflexed, 2-3 cm. long, the blade not expanded or flattened: spathe long and narrow and slender-pointed, 3-4 dm. long, 2 cm. broad, densely covered with short hair-like spines 5-10 mm. long, peduncle nearly unarmed; spadix simple, unarmed, rachillæ 8-12 cm. long, scarcely undulate although not rigidly straight: fruit short-oblong, briefly pointed, about 15 mm. long at dry maturity and 10-11 mm. broad, brown, glabrous and unarmed, shell very thin; seed strongly reticulated, filling the shell.

Venezuela, state of Miranda: Cárdenas in Siquire Valley, 400-800 m., *Pittier 7078* (type); Hacienda de Marare, near Ocumare del Tuy, 300-1200 m., *Pittier 7795*.

† *Desmoncus apureanus*, spec. nov. Fig. 77.

Scandens ad 2 m., sparse armatus, glaber: folia virella supra subterque, rachis nuda vel paucis acuminibus vel aculeis debilibus 1-2 cm. longis; pinnæ 12-20, pæne oppositæ vel sparsæ, latilanceolatæ, longiacuminatæ, 15-20 cm. longæ, 2-3.5 cm. latæ, multinervatæ; unci terminales validi, acuti, valde reflexi, 3-6 cm. longi: spadicis rachillæ 10 vel plus cm. longæ, simplices, undulatæ: fructus oblongi, 15 mm. longi, 7-8 mm. lati, apex brevissimus, inermis, cupula calycis minima.

Climbing to 2 m., scantily armed, glabrous: leaves light green on both surfaces, under surface minutely pimpellate under 20 diameter lens, rachis bearing scattered thick nodule-prickles 1-2 mm. long and perhaps a few black spines 1-2 cm. long; pinnæ 12-20, nearly opposite to scattered, broad-lanceolate, long-tapering to apex, 15-20 cm. long, 2-3.5 cm. broad, strongly many-nerved; terminal hooks on stiff angled axis, stout, sharp-edged, strongly reflexed, 3-6 cm. long: spathe not seen; branches of spadix 10 or more cm. long, simple, rachillæ 4-6 cm. long, strongly undulate or

wavy, the rachis perhaps bearing few very short weak prickles: fruit oblong, 15 mm. long, 7 or 8 mm. thick, nearly obtuse at brief apex, unarmed, calyx-cup very small, shell hard and thick; seed not developed.

Southern Venezuela, abundant in thickets on road to Churruscao,



77. *DESMONCUS APUREANUS*  $\times \frac{1}{3}$ . Part of spadix at top. Fruit  $\times 2$ .

west of San Fernando de Apure, *C. E. Chardon*. San Fernando de Apure is on the Orinoco, western part of Estado de Bolivar, near the juncture of Rio de Apure.

† **Desmoncus Velezii**, spec. nov. Fig. 78.

Gracilis, scandens, glaber præter in spatha: folia circa 8 dm. longa; pinnæ 5-7 in utroque rachis latere, 16-20 cm. longæ, 4 cm. vel minus latæ, longo-lanceolatæ et longo-acutæ, valde multinervatæ, spinæ irregulares in rachi, 2-5 cm. longæ; unci terminales 5-7 paribus, crassi basi et recurvi, unci inferiores plani et 1 cm. lati, 8 cm. longi basi cirrhi ad 1 cm. longi apice: spatha circa 20 cm. longa, 3-4 cm. lata expansione, gracilibus aculeis sparsis 1 cm. vel minus longis; spadix tam latus quam longus, rami 8 cm. vel minus longi: fructus oblongi, 10-13 mm. longi, 1 cm. lati, inermes.

Slender but vigorous, tall-climbing: leaves thin, glabrous, green both surfaces, with opposite or scattered spines 3-5 cm. long on petiole and midcosta; pinnæ 10-12 or more, scattered or the upper ones opposite, lanceolate to elliptic-lanceolate, 12-20 cm. long, 2-3 cm. broad, acuminate, unarmed unless a spicule or two near apex, lateral longitudinal veins many but not very conspicuous; terminal unci or hooks broad, reflexed, not very sharp, thickened at base, 1-4 cm. long, lowest ones expanded: spathe narrow, 12-14 cm. long, 1.5-3 cm. broad, tapered to prominent point, covered loosely with short divaricate weak hair-like aciculæ, peduncle very short; spadix small, simple, about 9 cm. long, peduncle slightly aculeate; rachillæ very slender, prominently undulate; calyx cupulate, entire, about 2 mm. broad, exceeded somewhat by the pistil: fruit ellipsoid or obovoid, abruptly pointed, 1.5 cm. long, 1 cm. broad, unarmed.

Southwestern Venezuela, at Puerto Paez in Apure, *I. Velez* (of Puerto Rico) 2308.

† **Desmoncus vacivus**, spec. nov. Fig. 79.

Debillimus et ut videtur parvus, glaber, scandens, sparse armatus; caulis tenuis, 1 cm. vel minus crassus vaginis reticulatis apice: folia tenuia, viridia utrinque; pinnæ circa 5 paribus oppositis, lanceolato-ellipticæ, longiacuminatæ, 10-12 cm. longæ, 2-3.5 cm. latæ, costatæ; petiolus et costa media aculeis hamatis 1-2 mm. longis; hami terminales valde graciles, reflexi, circa 4 paribus, 2 cm. vel minus longi: fructus ellipsoidei, 2-2.5 cm. longi cum sicci, 2 cm. lati, apex brevissimus, glaber, inermis, scissus longitudine; semen valde reticulatum.

Very weak (powerless, *vacivus*) glabrous climber only minutely armed; stem thin, apparently not spiniferous, 1 cm. or less thick with short sheaths reticulate at apex: leaves thin, green both surfaces, with about 5 pairs of opposite lance-elliptic acuminate leaflets 10-12 cm. long and 2-3.5 cm. broad, lateral ribs prominent and intervening longitudinal veins not conspicuous; petiole and midrib bearing hooked prickles 1-2 mm. long; terminal hooks about 4 pairs at end of long cirrhus, reflexed, very slender, 2 cm. or less long; spathe not seen; spadix perhaps simple: fruit ellipsoid,