Famílias	Espécies	Localização	Datas, estados fenológicos e observações
Agavaceae	*Fourcroya gigantea* Vent.	N. ins.	VI, 3-fl.; (V,9)-plântulas. N.v. = pita.
Aizoaceae	*Sesuvium portulacastrum* L.	N. ins.	VI, 3-fl.
Amaranthaceae	*Philoxerus portulacoides* St. Hil.	N. ins.	VI, 3-fl.; XII, 19-fl.
Anacardiaceae	*Schinus terebinthifolius* Raddi	N. ins. & TR	VI, 3-fr. mat.; XII, 19-fr. mat.; (V,9)-fr. mat. N.v. = aroeira.
Aviceniaceae	*Avicenia Schaueriana* Stapf. et Leechman ex Moldenke	N. ins.	VI, 3-fl. N.v = mangue siriuba, mangue amarelo
Bromeliaceae	* *Bilbergia Tweedieana* Baker	TR	IX, 30-fl.; X, 24-fl/fr.; XII, 19-st. Flores verdes
	Tillandsia stricta Soland.	F.S/SE	VII, 9-fl.; XII, 19-st.; XII, 29-fl. (V,9) fl/fr.
	Tillandsia usneoides L.	F.S/SE	VI, 3-st. N.v. = barba de velho.
Cactaceae	* *Cephalocereus fluminensis* (Miq.) Britton et Rose	TR	VI, 3-st.; VI, 17-fl.; VII, 9-fr. mat.; X, 24-fl.; XII, 19-fl/fr. mat.; XII, 29-fr. mat.; I, 13-fl.
	* *Cereus fernambucensis* Lem.	N. ins.	VI, 3-st.
	* *Pilosocereus arrabidae* (Lem.) Byles et Rowl.	TR & M. ins.	VI, 3-st.; X, 17-fl.; X, 24-fl/fr.; XII, 19-fr mat./ imat.; I, 13-fl.; (V, 9) fl/fr. imat./fr. mat.
	* *Selenicereus setaceus* (S.D.) Berg.	TR & N. ins.	VI, 3-st.; X, 17-bot.; X, 24-bot.; XI, 2-fl.; XII, 19-fr. mat. Planta com hábito escandente.
Capparidaceae	*Capparis flexuosa* Vell.	N. ins.	VI, 3-fr.; XII, 19-fl.
	Caparidastrum brasilianum (DC) Hutch.	N. ins.	VI, 3-st.; XII, 19-st.; XII, 2-fl. em Paquetá.
Celastraceae	*Maytenus obtusifolia* Mart.	N. ins.	VI, 3-st.; X, 24-fl.
Clusiaceae	*Clusia fluminensis* Pl. et Tr.	TR	VI, 3-fr. imat.; VI, 17-fr.; XII, 19-fl.; XII, 29-fl. abundantes; I, 13-fl.
Combretaceae	*Laguncularia racemosa* Macbr.	N. ins.	VI, 3-st.; XII, 19-fr. imat. (V,9)-fl/fr. imat. N.v. = mangue branco.
Leguminosae	* *Caesalpinia Bonducella* Roxb.	N. ins.	VI, 3-fr. imat.; X, 24-fr. secos; XII, 19-fl.
	Dalbergia ecastophylla (L.) Taub.	N. ins.	VI, 3-fr. imat.; XII, 19-fr. imat/fl. final.
Malpighiaceae	*Stigmaphyllum ciliatum* (Lam) Juss.	N. ins.	VI, 3-st.; X, 24-fr.; XII, 19-fl. (V,9)-fl. Trepadeira, folha cordiforme, suculenta.
Malvaceae	*Hibiscus pernambucensis* Bertol.	N.ins.	VI, 3-fr. mat.; XII, 19-fl.

Inventário das espécies características das Ilhas Itapuamas (junho de 1984 a janeiro de 1985 e maio de 1986). Códigos: *N. ins.*-núcleos insulares; *F.S/SE*-faces das rochas voltadas para o sul ou sudeste; *TR*-topo de rocha sem influência direta da maré; *bot.*-em botão; *fl.*-em flor; *fr. imat.*-frutos imaturos; *fr. mat.*-frutos maduros; *fl/fr*-em flor e fruto simultaneamente; *st*-estéril; *-com espinhos; *Nv*-nome vulgar.

Malvaceae	*Hibiscus pernambucensis* Bertol.	N.ins.	VI, 3-fr. mat.; XII, 19-fl.
Moraceae	*Ficus tomentella* Miq.	N. ins.	VI, 3-fl/fr. Apenas 1 exemplar em I. de Dentro. Comum em Paquetá. N.v. = figueira.
Myrsinaceae	*Rapanea parvifolia* Mez.	TR	VII, 9-fr. mat. Leg. perto da Ilha das Folhas.
Myrtaceae	*Eugenia uniflora* L.	N. ins.	VI, 3-st.; XII, 19-fl/fr. imat.; (V,9) fl/fr. imat/ /fr. mat. N.v. = pitangueira.
Nyctaginaceae	*Guapira nitida* (Mart.) Lundell.	N. ins. & TR	X, 24-fl.; XII, 19-fl. Sob. *Clusia.*
	Guapira opposita (Vell.) Reitz.	N. ins.	VI, 3-fl/fr.; X, 24-fl.; XII, 19-fl/fr.
Olacaceae	*Ximenia americana* L.	N. ins.	X, 24-bot. (em I. de Dentro); XII, 24-fl. (em Paquetá); II-fr. mat. (Paquetá). Fls. aromáticas.
Orchidaceae	*Brassavola tuberculata* Hook	F. S/SE	VI, 3-fr/fl.; X, 24-fl/fr.; XII, 19-fl/fr. imat.; XX, 29-fl.; I, 13-st.; (V,9)-fl. abundantes.
Piperaceae	*Peperomia pereskiaefolia* (Jacq.) HBK	N. ins.	VII, 9-fl.; (V,9)-fl.
Polypodiaceae	*Doryopteris colina* (Raddi) J.Sm.	TR	VI, 17-fértil
	Polypodium brasiliense Poir.	F.S/SE	IX, 30-fértil
	Polypodium lanceolatum L.	F.S/SE	VI, 3-fértil; I, 13-fértil
Rhamnaceae	**Scutia arenicola* Reiss.	N. ins.	VI, 3-fl.; XII, 19-fr. imat.
Rhizophoraceae	*Rhizophora mangle* L.	N. ins.	VI, 3-fl. N.v. = mangue vermelho. 1 só exemplar.
Sapindaceae	*Cupania* sp.	TR	Jovem. Acidental.
	Allophylus puberulus Radlk.	TR	VI, 3-st.; XI, 30-fr. imat/bot.; X, 16-bot.; X, 24-bot.; XII, 19-fl.
Sapotaceae	**Bumelia obtusifolia* Roem. et Schult. var. *excelsa* (DC) Miq.	N. ins.	VI, 3-st.; X, 10-fl.(em Paquetá). N.v. = quixaba ou quixabeira.
Musgos	....	.....TR.....	Entre *Cephalocereus fluminensis.*
Líquenes	....	.....F & TR	Incrustantes na superfície das rochas.

Inventário das espécies características das Ilhas Itapuamas (junho de 1984 a janeiro de 1985 e maio de 1986). Códigos: *N. ins.*-núcleos insulares; *F.S/SE*-faces das rochas voltadas para o sul ou sudeste; *TR*-topo de rocha sem influência direta da maré; *bot.*-em botão; *fl.*-em flor; *fr. imat.*-frutos imaturos; *fr. mat.*-frutos maduros; *fl/fr*-em flor e fruto simultaneamente; *st*-estéril; *-com espinhos; *Nv*-nome vulgar.

A checklist of the Aquifoliaceae of Bahia

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Introduction

Early in 1978, R.M. Harley brought me what he thought was an unusual holly; one which he had collected from the Serra do Sincorá in 1974. It was totally unlike any holly I had seen before and I could find nothing quite like it among our Brazilian collections. Over the next few years I searched through other herbaria and eventually came to the conclusion that it must be a new species. Thus *Ilex auricula* S. Andrews sp. nov. (1983) fired my enthusiasm for Brazilian *Ilex.* When I was later approached to provide a checklist of Bahian *Ilex,* I was delighted at the opportunity.

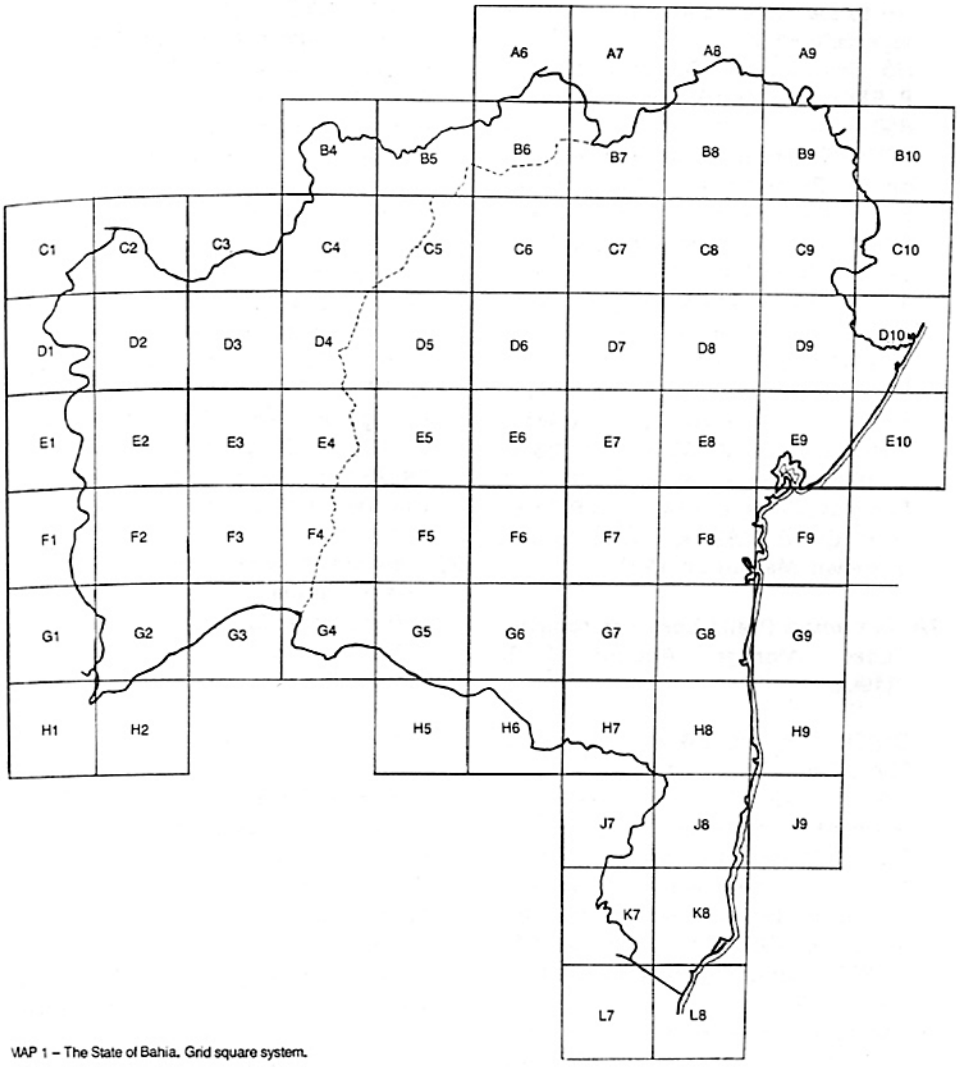
The fifteen species of *Ilex* from Bahia fall into four vegetation zones, *caatinga*: seasonal deciduous thorn forest on light friable soils; *campo rupestre*: scattered evergreen shrubs and small trees on skeletal soils associated with rock outcrops at high altitude; *cerrado*: seasonal savanna woodland and *restinga*: open coastal strand communities or scrub or occasionally closed vegetation on open sand. Five taxa occur in caatinga, ten in campo rupestre, two in cerrado and five in restinga. *Ilex amara* var. *latifolia* forma *ovalifolia* has a most unusual distribution as it has been found in coastal restinga and also caatinga. The area of highest concentration of *Ilex* is in the Serra do Sincorá (F6) where ten taxa occur.

The majority of the Bahian *Ilex* occur in the inland areas of Bahia while only five taxa are to be found along the coast. The coastal hollies mostly, have a much larger leaf surface area compared to the inland hollies which have more coriaceous and often very small leaves. No species have so far been reported from the coastal rainforests.

The following taxa appear to be endemic to Bahia: *Illex auricula, Ilex blanchetii, Ilex paraguariensis* var. *sincorensis, Ilex* sp. A and *Ilex* sp. B. Of the eighteen taxa which occur in Bahia, ten are found in Minas Gerais, three in Rio de Janeiro, São Paulo, Paraná, Santa Catarina and Goiás, two in Pernambuco, Espírito Santo, Rio Grande do Sul and Distrito Federal and one each in Paraguay and Argentina.

Mate is an essential beverage in South America and has been made from *Ilex paraguariensis, Ilex theezans, Ilex conocarpa* and *Ilex amara* in Brazil as well as several other species. It would be interesting to know what are the economic uses, if any of the Bahia *Ilex*.

For each plant its known distribution within Bahia is recorded by coded grid square (map 1).



MAP 1 – The State of Bahia. Grid square system.

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I wish to thank the directors of the following herbaria for sending material on loan to me: British Museum (BM), Itabuna (CEPEC), Hamburg (HBG), Munick (M), New York (NY), Paris (P), Rio de Janeiro (RB), São Paulo (SP) and U.S. National Arboretum (NA).

I am grateful to many of my colleagues for their help and advice especially R.M. Harley, G.P. Lewis and S.J. Mayo.

Key to taxa in Bahia (based on herbarium specimens; a mature lamina is measured unless otherwise stated).

1. Lamina with punctate dots beneath, margins serrate.
   2. Lamina closely punctate beneath.
      3. Fruit ovoid, 0.7 cm long. Lamina ovate-elliptic, 4-4.6 x 2-2.5 cm. Campo rupestre only . . . . . 15 — *I. sp. B*
      3'. Fruit globose, less than 0.7 cm long.
         4. Lamina elliptic, (10–) 10.7-11 x (2.6–) 3.4 x 3.7 cm ? Caatinga only. . . . . 6 — *I. conocarpa*
         4'. Lamina elliptic to ovate, 4-5 x (1.5-) 2-2.3 (–2.7) cm. Coastal restinga and caatinga . . . . . 2B — *I. amara* var. *latifolia* forma *ovalifolia*
   2'. Lamina rarely closely punctate beneath.
      5. Lamina narrowly-elliptic to ovate, (2.1-) 3.3-6.7 x 0.9-2.1 cm. Campo rupestre only . . . . . 2A — *I. amara* var. *bahiensis*
      5'. Lamina elliptic-lanceolate to elliptic, occasionally broadly elliptic, (5-) 7.5-10.3 x 1.5-3 (-4.4) cm. Caatinga, (wet) campo rupestre and cerrado. . . . . 1 — *I. affinis*
1'. Lamina without punctate dots beneath, rarely serrate
   6. Lamina less than 3.5 cm long.
      7. Lamina strongly convex above with margins strongly revolute. . . . . 4. I. auricula
      7'. Lamina not strongly convex above.
         8. Peduncle of inflorescence 1.5 cm long, lamina elliptic to ovate, 3-3.8 cm long . . . . . 10 — *I. pseudobuxus*
         8'. Peduncle of inflorescence less than 1.5 cm long.
            9. Lamina cordate, less than 1 cm long. . . . . 14 — *I. sp. A*
            9'. Lamina not cordate.
               10. Lamina crisply pubescent above, densely pubescent below, apex acute . . . . . 3 — *I. asperula* var. *asperula*
               10'. Lamina glabrous or pubescent above, glabrous below except for the occasional haris on the midrib and veins, apex obtuse or emarginate . . . . . 11 — *I. pseudovaccinium*.
   6'. Lamina more than 3.5 cm long, (except sometimes in *I. theezans* var. *theezans*).
      11. Mature fruit ovoid, more than 0.7 cm long, lamina elliptic to oblong, (7.3-) 8-10.5 (-11.5) x (2.8-) 4-5.3 cm, apex mucronate, margins not serrate. . . . . 9 — *I. psammophila*
      11'. Mature fruit globose, 0.7 cm long, lamina ovate, (5-) 6-8.5 x 3.2-4.7 (-5.4) cm, apex obtuse, margins serrate. . . . . 8 — *I. paraguariensis* var. *sincorensis*
      11''. Mature fruit globose, less than 0.6 cm long.
         12. Lamina ovate to broadly ovate.
            13. Petioles 1 cm long, lamina broadly ovate to ovate, 7-10 x 4-7.9 cm . . 12B — *I. theezans* var. *acrodonta*

13'. Petioles up to 0.5 cm long, lamina ovate, 5.5-7.3 x 4.5-5.5 cm . . . . . .5 — *I. blanchetti*

12'. Lamina elliptic or obovate.

14. Lamina densely pubescent beneath. . . . . 13 — *I. velutina*

14'. Lamina glabrous beneath.

15. Lamina obovate, often emarginate, occasionally mucronate. Inland species . . . . . 12A — *I. theezans* var. *theezans*

15'. Lamina elliptic, emarginate rarely serrulate, apex acute. Coastal species. . 7 — *I. floribunda*

Ilex L.

Loesener, Monogr. Aquifol. 1, (1901), 2 (1908); Edwin and Reitz, Aquifoliáceas. Fl. Ilust. Catar. 1, (1967). About 400 species spread throughout the temperate and tropical regions of the world; of which some 150 species are said to occur in Brazil, with 15 species in Bahia.

1. *Ilex affinis* Gardn. in Hook. Ic. Pl. New Ser. 1, (1842).
Syn: *Ilex rivularis* Gardn. loc. cit.; *Ilex apollinis* Reiss. (1861); *Ilex affinis* Gardn. var. *latifolia* Reiss. loc. cit.; *Ilex affinis* Gardn. var. *apollinis* (Reiss.) Loes. (1901).

DISTR. D5, F1/2, F6. Brazil — Bahia, Distrito Federal, Goiás, Maranhão, Minas Gerais, Paraná; Paraguay.
HAB. Shrub to small tree 0.7-5 m. River margins, wet campo, cerrado and caatinga.
NOTE. I have seen duplicates of Blanchet 2922 at K, P and BM. Loesener saw duplicates from K and P as well as at several other herbaria. In *Monogr. Aquifol.* 1:446 (1901), he gives the locality as 'prope Bahia' but on the Herb. Benth. sheet at K (which he did not see, as this herbarium was kept separate at the time) is written 'Serra Açuruá'.
This species differs from *Ilex conocarpa* in that the leaves are not closely punctate beneath and the flowers are pubescent inside. It would be interesting to see more material from D5 and especially F1/2.
D5: Serra Açuruá, Blanchet 2922 (K, P, BM)!; *F1/2:* c. 150 km SW Barreiras, 850 m, Irwin et al. 14763 (K)!, 14736 (K)!; *F6:* Below Livramento waterfall on Rio Brumado, 41° 50' W, 13° 39' S, c. 460 m. Harley et al. 19874 (K)!; SW of Mucugê on road to Cascavel, 41° 24' W, 13° 01' S, c. 950 m, Harley et al. 18823 (K)!; WNW along road from Vila do Rio de Contas to Pico das Almas, 41° 53' W, 13° 33' S, c. 1300 m, Harley et al. 19818 (K)!; 10 km N of Rio de Contas on road to the town of Mato Grosso, 41° 50' W, 13° 28' S, c. 1000 m, Harley et al. 15291 (K)!; Pico das Almas, c. 1250 m, G.P. Lewis et al. CFCR 6899 (K)!; exact locality unknown: Martius s.n. (M)!.

2A. *Ilex amara* (Vell.) Loes. var. *bahiensis* Loes., Monogr. Aquifol. 2:292 (1908).

DISTR. D6, E6, F6. Brazil — Bahia, Minas Gerais.
HAB. Shrub of 1-5 m, locally very common. Campo rupestre.
NOTE. To date, the type of *Chomelia amara* Vell., the basionym of *Ilex amara,* has not been located and the illustration in Fl. Flumin. 1, tab. 106, (1835) is not of sufficent quality to be identifiable.
Many specimens from Goiás, Espírito Santo, Rio de Janeiro, São Paulo and Paraná seen by me have been identified by other workers as belonging to various infraspecific taxa os the *Ilex amara* 'complex'. Several of these taxa are morphologically very similar and most show a tendancy to intergrade making identification very difficult. It may prove sensible from a taxonomic and nomenclatural point of view to treat *I. amara* as polymorphic, but Loeseners' variety *bahiensis* is recognised here as distinct pending further investigation. Some collections from Bahia as well as other parts of Brazil have been named *I. dumosa* Reiss. It is not clear that these are distinct from *I. amara* plus var. *bahiensis.* Further study of these two species is necessary before an adequate solution can be reached.
D6: Morro do Chapéu, Duarte 9205 and Pereira 10115 (K)!; *E6:* c. 15 km NE of Palmeiras, 1000-1200 m, Mori 12905 (NY)!, 12901 (K)!; by Rio Cumbuca, about 3 km N of Mucugê on the Andaraí road, 41° 21' W, 12° 59' S, c. 850 m, Harley et al. 18706 (K)!; Estrada Mucugê-Guiné a 5 km de Mucugê, Furlan et al. CFCR 1942 (K)!; c. 8 km NW de Lençóis, estrada por Barro Branco, Carvalho et al. 1051 (K)!; próximo ao Morro do P. Inácio, a BR-242, Lençóis, 1000 m, Harley et al. CFCR 7274 (K)!; *F6:* 3 km S de Mucugê na estrada que vai para Jussiape, 1000 m, Mori and Benton 13151 (K, NA)!; 2-3 km approx. SW Mucugê on road to Cascavel, 41° 24' W, 13° 01' S, c. 950 m, Harley et al. 18825 (K)!; Serra do Sincorá, 1500 m, Ule 7083 (K)! (Type).

2B. *Ilex amara* (Vell.) Loes. var. *latifolia* Reiss. forma *ovalifolia* (Bonpl. ex Miers) Loes., Monogr. Aquifol. 1:460 (1901).
Syn.: *Ilex ovalifolia* Bonpl. ex Miers (1861); *Ilex paraguariensis* St. Hil. var. *latifolia* Reiss. (1861).

DISTR. C8, K8. Brazil — Bahia, Espírito Santo, Minas Gerais, Paraná, Rio de Janeiro, Rio Grande do Sul.
HAB. Shrub to 1 m in coastal restinga. Found also in caatinga (unusual distribution).
NOTE. This is another of the many taxa of the *Ilex amara* 'complex' described by Loesener in 1901 and 1908. It is not so distinct as var. *bahiensis* and would appear to resemble var. *amara.* Again further study is necessary.
C8: inter dumeta ad. M. Sanctum (Monte Santo), Martius s.n. (M)! (Type of *Ilex paraguariensis* var. *latifolia*); *K8:* Caravelas, Lanna 1434 (CEPEC)!.

3. *Ilex asperula* Reiss. var. *asperula*.
Syn.: *Ilex asperula* Reiss. (1861); *Ilex asperula* Reiss. var. *martiusiana* Loes. (1901).

DISTR. B7. Brazil — Bahia, Minas Gerais.
HAB. Caatinga.
NOTE. Loesener (1901) stated that this could be allied to *Ilex subcordata* Reiss. but that the indumentum on the underside of the leaf is different and I agree with this. More flowering and fruiting material is needed.

B7: Joazeiro, Martius s.n. (M)! (Type of *Ilex asperula*).

4. *Ilex auricula* S. Andrews sp. nov. in Kew Bull. 37,(4):681 (1983).

DISTR. F6. Brazil — Bahia.
HAB. Shrub of 1-3 m. Campo rupestre.
NOTE. This Bahian endemic is closely related to *Ilex scutiiformes* Reiss., *Ilex nummularia* Reiss. and *Ilex subcordata* Reiss. all of which occur in Minas Gerais. It is probable that the latter two species are geographical varients of a very variable species.
F6: NW face of Serra de Ouro, E of Barra da Estiva-Ituaçu road, about 9 km of Barra da Estiva, approx. 41º 16' W, 13º 42' S, 1300-1500 m, Harley et al. 20882 (K)!; c. 6 km N of Barra da Estiva on Ibicoara road, 41º 18' W, 13º 35' S, c. 1100 m, Harley et al. 15536 (K, CEPEC)! (Type); Estrada Barra da Estiva-Capão da Volta, a 7 km da Barra da Estiva, Giulietti et al. CFCR 1336 (K)!; estrada Barra da Estiva-Mucugê 7 km, 41º 22' W, 13º 38' S, 1220 m, L. Coradin et al. 6382 (K)!.

5. *Ilex blanchetii* Loes., Monogr. Aquifol. 1:415 (1901).

DISTR. E9. Brazil — Bahia.
HAB. Shrub of 1.5-2.5 m. A coastal species found on dunes.
NOTE. Closely related to *Ilex theezans* Mart. ex Reiss. var. *acrodonta* (Reiss.) Loes. but differs by having much shorter petioles.
E9: iuxta Salvador, Blanchet 1800 (BM, P)! (Type); c. 35 km NE of Salvador city, 3 km NE Itapoã, Morawetz 16-5978; Bairro of Itapoã, vicinity of airport, Dois de Julho, Mori et al. 14073 (NY)!; c. 30 km N de centro da cidade, estrada para o aeroporto, arredores de Itapoã, Carvalho et al. 717 (NY)!.

6. *Ilex conocarpa* Reiss. in Mart., Fl. Bras. 11, (1):65 (1861).
Syn.: *Ilex symplociformis* Reiss. loc. cit.

DISTR. D7. Brazil — Bahia, Distrito Federal, Goiás, Minas Gerais.
HAB. ? Caatinga.
NOTE. *Ilex symplociformis* is exactly the same as *Ilex conocarpa* and it would be interesting to see fruiting material from Jacobina.
Ilex pseudothea Reiss. from Minas Gerais appears to belong to *Ilex conocarpa* but further material needs to be collected.
This species is characterised by the many punctate dots on the undersurfaces of the leaves, the sessile ♀ racemes, unbranched ♂ racemes and the glabrous insides of the flowers.
D7: propre Jacobina, Blanchet 3252 (K, P)!, 3612 (K)! (Types of *I. symplociformis*).

7. *Ilex floribunda* Reiss. ex Maxim. in Mém. Acad. Imp. St. Pétersbrg. Ser. 7, 29, 3:26 (1881).
Syn.: *Ilex floribunda* Reiss. ex Maxim. var. *typica* Loes. (1901); *Ilex floribunda* Reiss. ex Maxim. var. *minor* Loes. (1901).

DISTRI. E9, F8, G8, G8/G9, G8/H8, H8, J8, L8. Brazil — Bahia, Espírito Santo, Pernambuco, São Paulo.
HAB. Usually a shrub or tree from 2-15 m of coastal restinga but Mori et al. 10563 occurs slightly inland on a neglected cocoa plantation and is a 12 m tree.
NOTE. Superficially, this species could be confused with *Ilex cuiabensis* Reiss. and *Ilex inundata* Poepp., both of which occur in N. and C. Brazil.
E9: neighbourhood of Salvador, Blanchet 1256 (BM); *F8:* Enseada de Camamu, c. 5 km NE da sede do Mun. Ponta do Santo, Carvalho et al. 768 (CEPEC, K), 775 (K)!; Km 11 da estrada Ituberá/Valença: Carvalho & Plowman 1465 (K)!; Km 3-10 da Rod. Nilo Peçanha para Cairu, Santos 2659 (K)!; *G8:* 4 km ao Sul de Maraú, Belém 3517 (NY)!; *G8/G9:* Maraú, Santos 2225 (K)!; *G8/H8:* propre Iluéus et propre Una, Riedel 367 (NY)!; *H8:* a 23 km ao 5 de Olivença, Mori & Benton 13247 (K)!; *J8:* Km 10-15 da BR-367 Porto Seguro para Eunápolis, Eupunino 313 (K)!; *L8:* próx. à ponte sobre o Rio Mucuri na Rod. BR-101, Mori et al. 10563 (K)!; exact locality unknown, inter Vitória et Bahia, Sello s.n. (photograph NY)!; Riedel 3380 (BM)!; Riedel s.n. (P, NY)!.

8. *Ilex paraguariensis* St. Hil. var. *sincorensis* Loes., Monogr. Aquifol. 2:285 (1908).
N.V. Chá Congonha, Congonha (Conconha).
DISTR. F6. Brazil — Bahia.
HAB. Shrub 1-3 m, of campo rupestre.
NOTE. Variety *sincorensis* Loes. differs from var. *paraguariensis* St. Hil. and var. *vestita* (Reiss.) Loes. in its broadly elliptic leaves and larger fruit, up to 1 cm in length, compared to 0.5 mm in the other varieties. However, Anderson et al. 36003 (K)! and 35682 (K)! and Kuhlmann 2069 (K)! all from Rio de Janeiro and placed under var. *paraguariensis* have fruit up to 0.8 mm long.
F6: Serra do Sincorá, 1500 m, Ule 7082 (K, HBG)! (Type); Brejão, encosta da Serra do Sincorá, Lemos Fróes 20153 (K, NA, NY, L).

N.B. In their paper on the typification of *Ilex paraguariensis* St. Hil., Parodi and Grondona in *Rev. Arg. Agron.* 16, (4):199-204 (1949) cite St. Hilaire 1631 as the type collection. This is incorrect as St. Hilaire made 3 collections all of which numbered 1631 and were collected in Curitiba, (which in 1820 was in the state of São Paulo but today is the capital of Paraná). The 3 collections were numbered as 1631 (P)!, 1631 bis (P)! and 1631 ter (P)!. Only the 1631 bis is *Ilex paraguariensis* St. Hil.; 1631 ter belong to quite different families and have been described as such by St. Hilaire. Also, 1631 bis is the only collection to come from "les bois voisins de Curitiba", the type locality. (I am indebted to Dr A Lourteig of the Paris Herbarium for providing much of the above information).

Variety *paraguariensis* has been found in Brasil — Rio de Janeiro, Minas Gerais, São Paulo, Distrito Federal, Paraná, Mato Grosso, Santa Catarina, Rio Grande do Sul; Paraguay; Uruguay; Argentina; ? Bolivia. Variety *vestita* occurs in Brazil — Minas Gerais, Paraná, São Paulo.

9. *Ilex psammophila* Mart. ex Reiss. in Mart., Fl. Bras. 11, (1):42 (1861).

N.V. Vento-Sul.
DISTR. F8, G8, G9, H8, H9, J8, K8, L8. Brazil — Bahia, Espírito Santo, ? Minas Gerais.
HAB. Shrub to tree of 1.5-10 m, coastal restinga.

NOTE. *Ilex longipetiolata* Loes. from Rio de Janeiro is closely related to this species.

F8: Rodovia Nilo Peçanha/Cairu, Km 4, Carvalho, Mattos Silva & Hage 402 (K)!; *G8:* Fazenda Guanabara. Ramal com entrada no Km 10 da Rod. Pontal/Olivença, Mattos Silva, Hage & Brito 1170 (K)!; Fazenda Barra do Manguinho. Ramal com entrada no Km 12 da Rodovia Pontal/Olivença, ca. 50 m, Mattos Silva, Hage & Brito (K)!; propre Ilheos, Riedel s.n. (K)!; near Maraú, 39º 00' W, 14º 10' S, 0-50 m, Harley et al. 22141 (K)!; *G9:* 5 km SE Maraú at junction with the new road N to Ponta do Mutá, 39º 00' W, 14º 08' S, 0-50 m, Harley et al. 18503 (K)!; *H8:* Estrada Olivença/Una, a 23 km ao S de Oliveira, Mori & Benton 13252 (NA, K)!; Ramal à esquerda no Km 14 da Rod. Una/Canavieiras. BA-001, Hage & dos Santos 857 (K)!; *H9:* Km 8 ramal com direção N, que liga a Rod. Belmonte/Itapebi ao Rio Ubu, Mattos Silva, Ribeiro & da Brito 404 (NA)!; Belmonte, Belém & Pinheiro 3243 (NY)!; estrada Ilhéus/Una, Km 27 do S de Olivença, Carvalho & Lewis 869 (K)!; *J8:* entre 05 km 45-56 da Rod. Eunápolis/Porto Seguro (BR-367), Mori et al. 10962 (K, NY, CEPEC)!; Porto Seguro, próx. do Arraial da Ajuda, Duarte 8050 (K, NA); estrada do Arraial da Ajuda para Trancosa, Carvalho, Vinha & Brito 1282 (K)! and 1276 (K)!; *K8:* Rod. BA-001, trecho Alcobaça/Prado, a 5 km a NW de Alcobaça, Mori et al. 10570 (K)!; exact locality unknown, inter Vittoria et Bahia, Sellow s.n. (K)! (Type); Km 8 da Rod. BR-255, Alcobaça/Teixeira de Freitas, 39º 15' W, 17º 30' S, Hage, Mattos Silva & Ribeiro 274 (K)!; *L8:* a 7 km a NW de Mucuri, Mori, Mattos Silva & dos Santos 10476 (NA, K)! and 10487 (NA, K)!.

10. *Ilex pseudobuxus* Reiss. in Mart., Fl. Bras. 11, (1):40 (1861).
Syn.: *Ilex pseudobuxus* Reiss. forma *reissekii* Loes. (1901); *Ilex pseudobuxus* Reiss. forma *pedunculares* (Reiss.) Loes. (1901).

DISTR. F6. Brazil — Bahia, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul.
HAB. Shrub 1-2 m, in capão; ? campo rupestre.
NOTE. Only record from Bahia.

F6: Serra do Sincorá, 1100 m, Ule 7323 (K)!.

11. *Ilex pseudovaccinium* Reiss. ex Maxim., in Mém. Acad. Imp. St. Pétersbrg. Ser. 7, 29, 3:22 (1881).
Syn.: *Ilex pseudovaccinium* Reiss. ex Maxim. var. *typica* Loes. (1901); *Ilex pseudovaccinium* Reiss. ex Maxim. var. *scutiiformioides* Loes. loc. cit., *Ilex diminuta* Reiss. ex Maxim. (1881).

DISTR. E6, F6. Brazil — Bahia, Minas Gerais.
HAB. Shrub to 5 m in campo rupestre.
NOTE. In *Monogr. Aquifol.* 1:212 (1901) Loesener cites under *Ilex scutiiformis* Reiss., 4 Sellow numbers for the type locality of Serra do S. Antonio in Minas Gerais. Sellow B2084, C2038 (K)! appear to resemble Harley et al. 20889 and 22597 (see below). As the Sellow collection is ♂ and the recent collections are in fruit only, I would prefer to see more material before putting *Ilex pseudovaccinium* under the earlier epithet of *Ilex scutiiformis.*

I view of the recent studies caried out on the Bahian flora, it is interesting to note that Ule 7112 (HBG)! from the Serra da Vendinha, Sincorá, is the only Ule specimen (of any family) discovered to date with a more precise locality than Serra do Sincorá. *E6:* Serra Larga, perto de Caetá-Açu, 1400 m, R. Mello Silva et al. CFCR 7199 (K)!; Serra da Larguinha, c. 2 km NE of Caeté-Açu (Capão Grande), 41º 29' W, 12º 36' S, 1000-1400 m, Harley et al. 22597 (K)!; *F6:* NW face of Serra de Ouro, to E of Barra da Estiva-Ituaçu road, about 9 km S of Barra da Estiva, 41º 16' W, 13º 42' S, 1300-1500 m, Harley et al. 20889 (K)!; Serra da Vendinha, Sincorá, 1100 m, Ule 7112 (HBG)!.

12. *Ilex theezans* Mart. ex Reiss. in Mart., Fl. Bras. 11. (1):51 (1861). In Bahia, only the following two varieties occur.

12A. *Ilex theezans* var. *theezans.*
Syn.: *Ilex theezans* Mart. var. *Typica* Loes. (1901).

DISTR. B7, E6. F6, G7. Brazil — Bahia. Goiás. Minas Gerais. São Paulo. Paraná, Santa Catarina; Argentina.
Hab. Shrub to small tree, 1-3 m. By streams in cerrado, caatinga and campo rupestre.

NOTE. Martius' own collections are held at Munich (M), and often have very scanty annotations. There is also a manuscript which should be consulted with regard to Martius' Brazilian collections. This is *Platae in itinere brasiliensi annis 1817-1820 a Car. Frid. Phil. Martio descriptae.* Martius often refers to this manuscript in his publications by citing the numbers (1-3320) of the entries. These numbers sometime occur on the herbarium labels of Martius' plants at Munich as Obsv. (Observationes) nos. and according to F.A. Stafleu and R.S. Cowan in *Taxonomic Literature,* Vol. III, Lh-0:325 should be consulted in connection with this manuscript.

On a Martius sheet o *Ilex theezans* Mart. ex Reiss. var. theezans from Joazeiro, Bahia is writte in a hand other that of Martius, 'Mart. Obsv. 3138'. But, Martius in his manuscript, refers this number to *'Ilex leucophloca'* (an unpublished name) *'vel melius divaricata'* from Araracoara, Amazonas. The same Obsv. number occurs on two sheets supposedly from Bahia, according to the labels added at Munich, again by a hand other than Martius. These were formerly named *Ilex theezans* but were redetirmined by Loesener in 1897 as *Ilex divaricata* Mart. ex Reiss., a punctate-leaved species from Amazonian Brazil and Venezuela. Written on a small second label (in Martius' own hand) on one of these sheets is '3138 cfr. *Celastrus* Araracoara'. It is evident that the number 3138 has been variously applied by workers other than Martius, to two superficially similar but actually quite distinct species, and that the Martius collection from Joazeiro, Bahia in no way relates to the Martius Obsv. number 3138 in his manuscript. This sheet truly represents the non-punctate leaved *I. theezans,* known only from the coastal Brazilian states and Goiás.

Loesener in *Monogr. Aquifol.* 1: 375 (1901) mentions how he had been confused by the Martius spe-

cimens under *Ilex theezans* at Munich. Of the five sheets I have examined, three bear remarks by Loesener. On the sheet designated as the type, from 'in montosis ad Sebastianopolin' (Rio de Janeiro) there are 3 specimens, one of which has been singled out by Loesener – 'this specimen occurs probably from Bahia'; on the sheet from 'Rio de Janeiro' there are 2 specimens, one of which he has annotated "this specimen occurs probably not from Rio de Janeiro but from Bahia'; on the sheet from Bahia there are 3 specimens, one of which has 'this specimen occurs only from Rio de Janeiro and not from Bahia'. Loesener also noted that all the specimens from Bahia had 3-flowered long-pedicelled inflorescences occurring from the new wood while the specimens from Rio de Janeiro occurred in the old leaves in 1-3 flowered fascicles; while in both cases the foliage remained identical.

The only other flowering specimens which I have seen from Bahia are Mori et al. 11275, which has the long-pedicelled inflorescence and Furlan et al. CFCR 2024 which has both types of inflorescence. All other Brazilian flowering material of *Ilex theezans* has the fasciculate inflorescence except for a specimen of var. *theezans* from São Paulo (Handro 416).

Variety *theezans* is an inland variety with a variable leaf morphology.
B7: ad Joazeiro, Martius s.n. (M)!; *E6*: Estrada Mucugê-Guiné a 28 km de Mucugê, Furlan et al. CFCR 2024 (note reduced lamina) (K, NA)!; *F6*: Middle NE slopes of Pico das Almas c. 25 km WNW of Vila do Rio de Contas, 41º 57'W, 13º 33'S, 1500-1600 m, Harley et al. 19634 (K)!; *G7*: BA-265, trecho Vitória da Conquista/Barra da Choça, 9 km a leste da 1ª Região de mata de cipó, 900 m, Mori, dos Santos and Thompson 11278 (K)!; Km 5 a 15 da rod. Conquista/Barra da Choça Carrasco, Santos 2525 (K)!.

12B. *Ilex theezans* var. *acrodonta* (Reiss.) Loes., Monogr. Aquifol. 1: 375 (1901).
Syn.: *Prinos serratus* Vell., Fl. Flumin. : 145 (1825), Fl. Flumin. 3, tab. 166 (1835); *Ilex acrodonta* Reiss. in Mart., Fl. Bras. 11, (1) : 51 (1861), *Ilex acrodonta* Reiss. var. *angustifolia* Reiss. (1861); *Ilex acrodonta* Reiss. var. *latifolia* Reiss. (1861); *Ilex nemorosa* Rizz. in Leandra, 6 : 43 (1975); *Ilex uniflora* Rizz. nom. illeg. (1974).

DISTR. G8, H8, H9, J8. Brazil – Bahia, Minas Gerais, Rio de Janeiro, Santa Catarina.
HAB. Shrub of 3-8 m. Restinga.
NOTE. This plant has longer petioles than *Ilex blanchetii*. Inflorescence in fascicles or solitary flowers.
G8: Olivença Km 21 para a Faz. Ipiranga ao Norte, Santos 2447 (K)!; ad Ilhéus, Lima 13088 (RB)! (Type of *Ilex nemorosa)*; *H8*: Rod. Belmonte/Itapebi, Km 26, 39º 00' W, 16º 01' S, Mattos Silva & Hage 582 (K)!; *H9*: Belmonte, Belém & Pinheiro 2459 (NY)!; *J8*: 11 km S of Santa Cruz Cabrália, 39º 01' W, 16º 22' S, Harley et al. 17056 (K)!; 4 km S along coast road BA-001 from Santa Cruz Cabrália to Porto Seguro, 39º 02' W, 16º 19' S, Harley et al. 18161 (K)!; Entra Santa Cruz Cabrália e Porto Seguro, a 15 km ao N da segunda, Mori et al. 13023 (K, CEPEC)!; próximo a Porto Seguro, Jesus 609 (CEPEC)!; BR-367, a 18.7 km ao N de Porto Seguro, Mori et al. 10341 (NY)!.

13. *Ilex velutina* Reiss. in Mart., Fl. Bras. 11, (1) : 53 (1861).

DISTR. F6. Brazil – Bahia, Minas Gerais, Pernambuco.
HAB. Shrub to 1.5 m. Campo rupestre.
NOTE. On the holotype sheet of Martius 1889 (M)! there is only one field label. This includes two distinct scripts. The most prominent (presumably that of Martius) states the locality as Pernambuco. The second unknown hand, adds a locality in Bahia. The specimen includes two identical flowering branches, and it is not at all clear whether these are both from Bahia, both from Pernambuco or one from each locality. Harley et al. 15644 is the first known collection since those of Martius.
F6: in altis campis ad Villam do Rio de Contas, Martius 1889 (M)! (Type); Serra do Sincorá, c. 6 km N Barra da Estiva not far from Rio Preto, 41º 18' W, 13º 35' S, 1100 m, Harley et al. 15644 (K)!; Rio de Contas, estrada para Livramento, Harley et al. CFCR 6826 (K)!; Pico das Almas, 1000 m, B. Stannard et al. CFCR 6885 (K)!.

14. *Ilex sp. A*

DISTR
DISTR. F6. Brazil – Bahia.
HAB. 2-2.5 m shrub of campo rupestre.
NOTE. This is another of the small-leaved hollies and shares the wand-like, little branched stem habit and half-hidden flowers of *Ilex auricula,* but the tiny heart-shaped leaves are flat and glabrous beneath. Possibly another Bahian endemic but more material particularly in fruit is needed.
F6: Margem da Estrada Mucugê-Cascavel. Km 3 a 6 próximo ao Rio Paraguaçu, Giulietti et al. CFCR 1454 (K)!; 3 km ao S de Mucugê, na estrada que vai para Jussiape, 1000 m, Mori & Benton 13162 (CEPEC, NA, NY)!.

15. *Ilex sp. B*

DISTR. F6. Brazil – Bahia.
HAB. 1 m shrub of campo rupestre.
NOTE. The blackish-purple, ovoid fruit distinguish this plant from the other punctate-leaved hollies which have globose berries.
F6: c. 6 km N of Barra da Estiva on Ibicoara road, 41º 18' W, 13º 35' S, c. 1100 m, Harley et al. 15559 (K)!.

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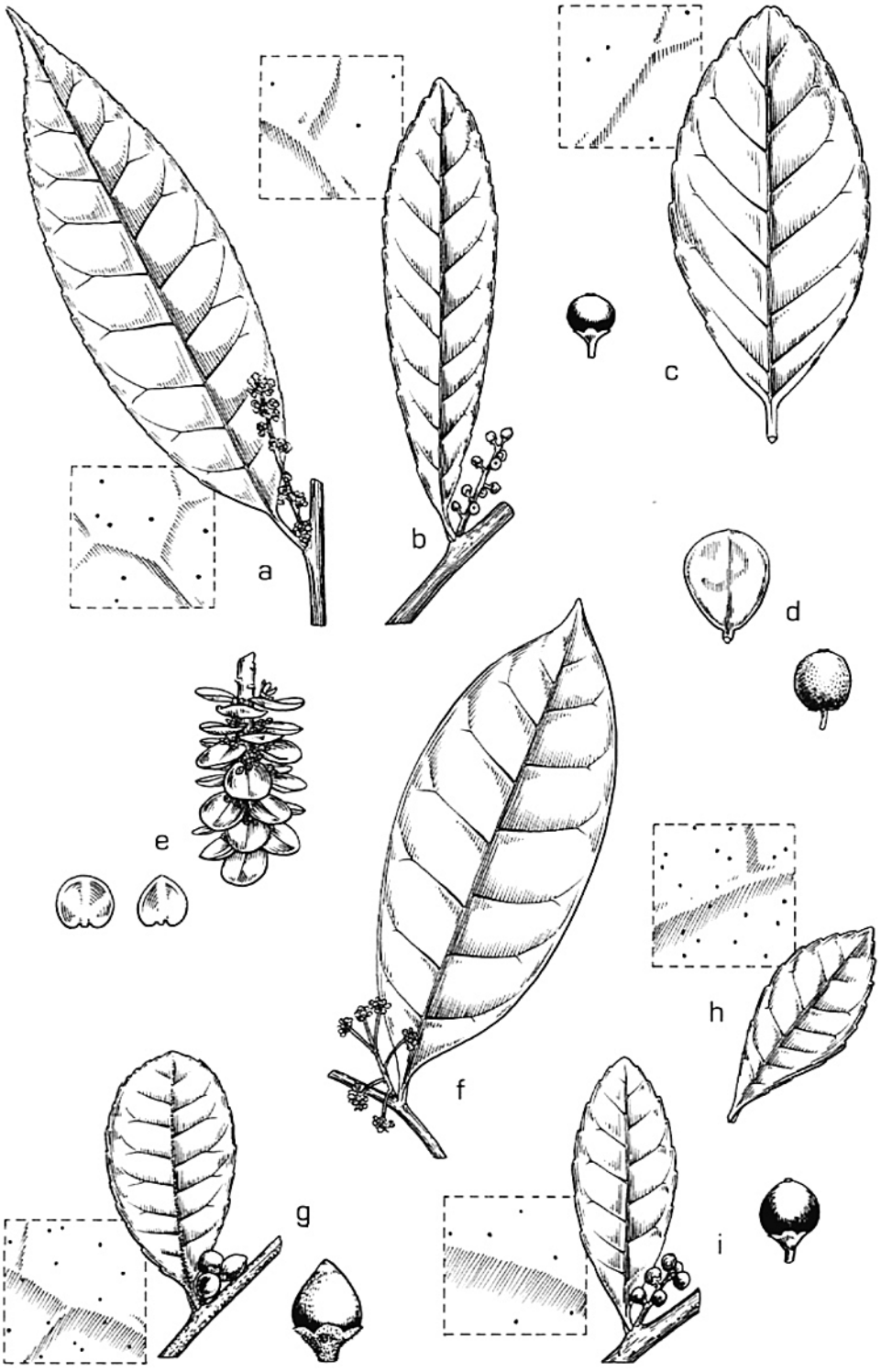

Fig. 1 — *Ilex conocarpa* — a. leaf and inflorescence with enlargement of underside of leaf; *I. affinis* — b. leaf and infrutescence with enlargement of underside of leaf; c. leaf with enlargement of underside and fruit; *I. pseudovaccinium* — d. leaf with enlargement of fruit; *I. sp A* — e. branch and inflorescence with enlargement of leaves; *I. floribunda* — f. leaf and inflorescence; *I. sp B* — g. leaf and inflorescence with enlargement of underside of leaf and fruit; *I. amara* var. *latifolia* forma *ovalifolia* — h. leaf with enlargement of underside; *I. amara* var. *bahiensis* — i. leaf and infrustescence with enlargement of underside of leaf and fruit. Drawing by E. Catherine.

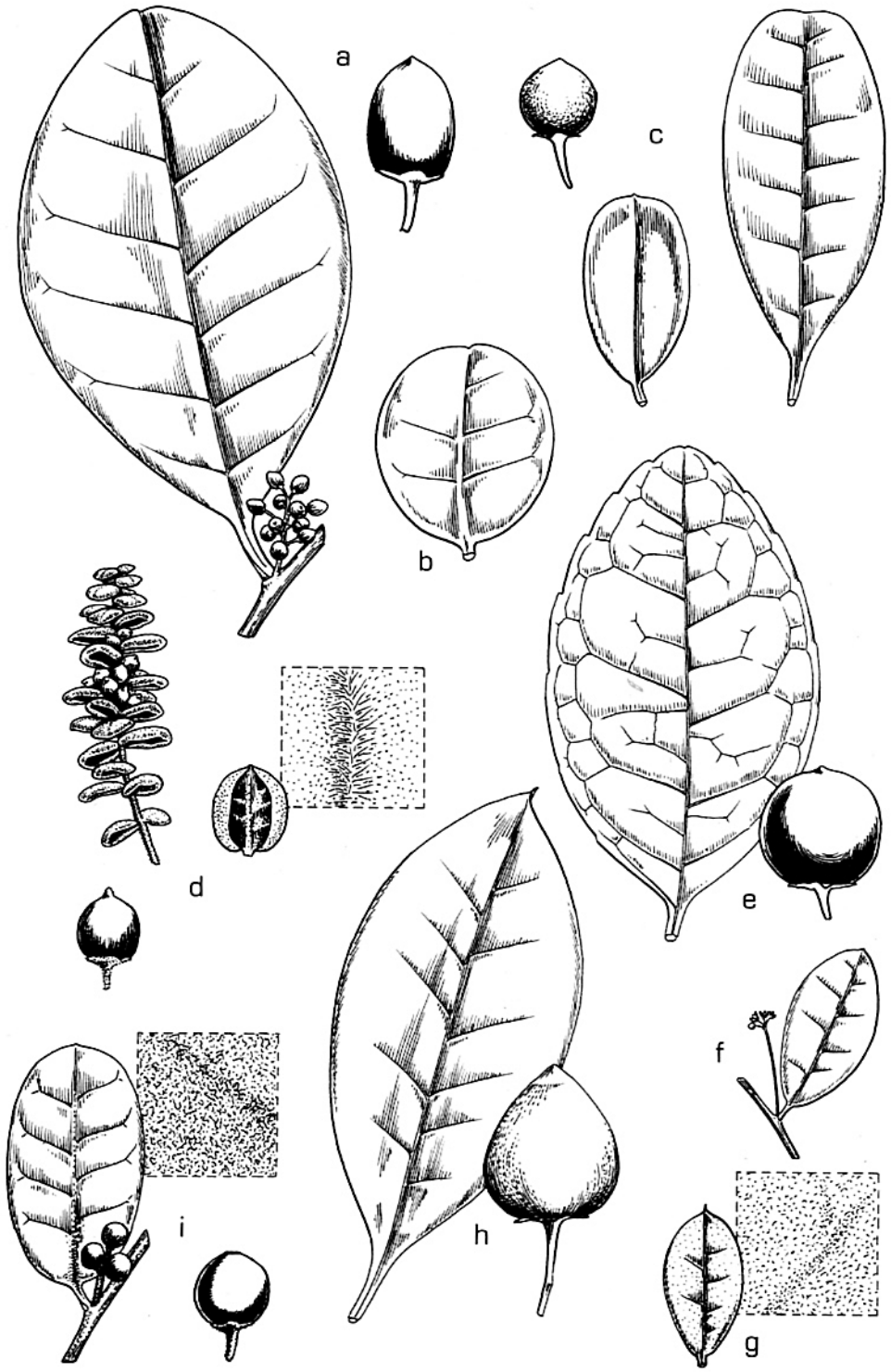

Fig. 2 — *Ilex theezans* var. *acrodonta* — a. leaf and infrutescence with enlargement of fruit; *I. blanchetii* — b. leaf; *I. theezans* var. *theezans* — c. leaves with enlargement of fruit; *I. auriculata* — d. branch with enlargement of leaf, its underside and fruit; *I. paraguariensis* var. *sincorensis* — e. leaf with enlargement of fruit; *I. pseudobuxus* — f. leaf and inflorescence; *I. asperula* var. *asperula* — g. leaf with enlargement of underside; *I. psamophylla* — h. leaf with enlargement of fruit; *I. velutina* — i. leaf and infrutescence with enlargement of underside of leaf and fruit. Drawing by E. Catherine.