

lissospatha, but as usual the description does not suffice for the determination of his species.

28. *B. Piranga* (Trail hb. Palm., 217).—Humilis; caudicibus 2-6 ex eodem rhizomate ortis, $\cdot 08^m\text{-}\cdot 30^m \times \cdot 012^m$, inermibus, valide annulatis, vaginis persistentibus aculeatis obvelatis; foliis $\cdot 9^m\text{-}1\cdot 5^m$, pinnatis; vagina $\cdot 15$ poll. striata, setis badiis aculeis nigris $\cdot 008^m\text{-}\cdot 035^m$ tenuibus commixtis vestita, in ochream fibrosam pubescentem producta; petiolo $\cdot 38^m\text{-}\cdot 45^m$, supra profunde sulcato aculeis $\cdot 02^m\text{-}08^m$ nigris tenuibus solitariis ad basin armato, et unacum costa setis ferrugineis dense vestito; pinnis 9-12-jugis, alternis vel jugis 4-6 inferioribus subbinatim aggregatis, rhomboideo-lanceolatis, falcato-acuminatis, $\cdot 22^m\text{-}\cdot 25^m \times \cdot 025^m\text{-}\cdot 08^m$ (apicalibus brevioribus), atroviridibus, supra glabris, subtus pubescentibus, ad apicem solum setosis; spatha exteriore $\cdot 07^m\text{-}\cdot 09^m \times \cdot 012^m$ bialata, coriacea, pubescente; spatha interiore $\cdot 22^m\text{-}\cdot 28^m$, fusiformi, setis ferrugineis dense vestita.

Spadicibus 2-4 in unaquaque stirpe, $\cdot 19^m\text{-}\cdot 25^m$, pedunculo deflexo, compresso, sparse setis brevibus armato, ad apicem ramos 3 (raro 2) tenues sparse pilis ferrugineis obsitos proferente; fl. ♀, calyce cupulari, ore trifido, extus glabro, corolla quam calyx duplo longiore, ore trifida, extus sparsissime setosa; ovario ovato stigmatibus subtrigono apicato; drupa spherica, rostellata, glabra, $\cdot 015^m \times \cdot 012^m\text{-}\cdot 015^m$, pulcherrima, rosea vel viridi, subtranslucida; endocarpio lenticulari.

Hab.—In sylvis recentioribus ad Santarem, fl. Jutahi, et ad Uará infra ostia fl. Juruá; flores et fructus fert mense Febuario. Indi eam vocant "Maraja-piranga."

Obs.—This species is hardly likely to be mistaken for any other save the next species, *B. trichospatha*, from which it may be known by its lower stature, by the form of the spines on the petiole, by the unaculeate spathe, by the few-branched spadix, and especially by the fruits. The leaves are not unlike those of *B. tomentosa*, Mart.

29. *B. trichospatha*.—Humilis vel mediocris, aculeata; caudicibus plerumque pluribus ex eodem rhizomate ortis, plerumque $1\cdot 5^m\text{-}3^m \times \cdot 015^m\text{-}\cdot 025^m$ inermibus vel aculeis ad nodia in semiannulos aggregatis, vel ad internodia sparsis, armatis; foliis plerumque $1\cdot 4^m\text{-}2\cdot 5^m$ interrupte pinnatis, pinnis omnibus in eodem plano lanceolatis, subfalcatis, longe acuminatis, supra glabris, subtus ad venas pubescentibus, subtus pallidioribus, ad margines nigro-setoso ciliatis, vena primaria 1-venis secundariis 6-8; vaginis et petiolis $\cdot 3^m\text{-}\cdot 6^m$ aculeis subnigris vel unaquoque medio pallidioribus compressis $\cdot 005^m\text{-}\cdot 06^m$ valide armatis et unacum costis setis vel pilis ferrugineis vestitis vel plus minus leprosis; spatha exteriore coriacea, pubescente vel apicem versus setosa, ancipiti; spatha interiore sublignea, fusiformi setis ferrugineis plerumque densissime obsita ideoque velutina, aculeis nullis, vel aculeis compressis, spadiceis unaquoque medio pallidioribus, ad margines dentatis, $\cdot 005^m\text{-}\cdot 015^m$, sparsis, adpressis armata; spadice $\cdot 20^m\text{-}\cdot 35^m$, pedunculo $\cdot 12^m\text{-}\cdot 22^m$, decurvo, compresso, pubescente vel velutino, ramos simplices 6-10 sursum attenuatos proferente; fl. ♂ albo; calyce membranaceo, minuto, in lacinas 3 subulatas acutas producto; corolla $\cdot 004^m$, ultra medium trifida, petalis ovatis cuspidatis, punctatis; staminibus 6, filamentis quam antheræ dimidio longioribus subulato-filiformibus, antheris erectis; pistilli rudimento nullo; fl. ♀ viridi, calyce, et corolla quam calyx $1\frac{1}{2}\text{-}2$ -plo longiore

cupularibus tridentatis, coriaceis, extus sparse pilis setisve brevibus nigris obsitis; ovario ovato, brevissime piloso; andrœcei vestigio nullo; drupa globosa, acuminata, diametro, $\cdot 015^m$, nigro-violacea, pilosa vel setosa; mesocarpio gossypioideo-pulposo; endocarpio lenticulari, processibus extus obsesso.

Subsp. *Jurutensis* (Trail hb. Palm., 30, 31).—Minor; caudice inermi, $\cdot 9^m$ - $2\cdot 4^m$; foliis $\cdot 6^m$ - 1^m ; pinnis 4-6-jugis, binatim aggregatis, $\cdot 18^m$ - $\cdot 32^m \times \cdot 05^m$ - $\cdot 08^m$, lato-lanceolatis; spadiceis ramis 6.

Hab.—Ad lacum Juruty in sylvis recentioribus.

Subsp. *trichospatha* (Trail hb. Palm., 68, 37, 145, 146, 167, 168).—Caudice $1\cdot 5^m$ - 3^m , plerumque ad nodia aculeis armato; foliis $1\cdot 4^m$ - $2\cdot 5^m$, interrupte vel raro subæqualiter pinnatis; pinnis 11-18-jugis, 3-8-natim aggregatis, $\cdot 25^m$ - $\cdot 50^m \times \cdot 04^m$ - $\cdot 06^m$; apicalibus brevioribus; spadiceis ramis 6-9.

Hab.—In sylvis primævis æque ac recentioribus ad lacum Cararauçu, fl. Amazonas; ad Barcellos, fl. Negro; ad Teffé; ad fl. Juruá, ad fl. Jutahi, ad Tonantins, et ad Tabatinga.

Var. *robusta* (Trail hb. Palm., 51, 152, 178).—Caudice $\cdot 2^m$ - $\cdot 7^m \times \cdot 025^m$ - $\cdot 05^m$ ad nodia aculeis valide armato; foliis $1\cdot 8^m$ - $2\cdot 5^m$ interrupte pinnatis pinnis 19-26 jugis; spadiceis ramis 9-12; fl. ♀ corolla, et calyce quam corolla brevioris, extus setosis.

Hab.—Ad Humaita, fl. Madeira; ad Pupunha, fl. Juruá; et ad Tabatinga.

Obs. 1.—A palm (Trail hb. Palm., 62) gathered at Caburi, fl. Negro, agrees with this variety in having leaves $1\cdot 8^m$ - $2\cdot 2^m$ long, with 21-22 pairs of pinnæ of the usual form and size, but the spadix bears only 6 branches; the costa is covered with a brown tomentum above instead of being setose. This specimen agrees in all points with *B. trichospatha* save in the fl. ♀, which has the calyx rather longer than the corolla, and both envelopes glabrous externally; possibly this is an individual peculiarity, as the flowers vary a good deal in degree of hairiness.

Obs. 2.—*B. umbrosa*, Barb. Rod. (l.c., p. 29, n. 7), seems to be allied to *B. trichospatha* so far as the description can be made out, but besides the meagre nature of the description, the absence of spadix and spathes renders it impossible to arrive at certainty regarding it. I subjoin the description:—

“7. *B. umbrosa*.—Stipite mediocri, altitudine $1\cdot 5^m$ - 2^m , diametro $0\cdot 015^m$ solitario (raro 2-3), frondibus interrupte pinuatis; petiolo aculeato (aculeis compressis, ad extremam partem ferme nigris), invaginante (parte invaginante aculeis parvis, aculeorum petioli similibus); foliolis 2-4 gregatis, quorum 4-5 fascies utrinque, apicalibus minoribus 6-7 aggregatis utrinque. *Hab.*—In edidis silvis ad fluvium Trombetas. Neque flores neque fructus vidi. (Barb. Rod. hb. Palm. 331.)”

Obs. 3.—*B. elatior*, Wallace (l.c. p. 81, t. xxx.), may belong to *B. trichospatha*, with which it agrees in habit, but from which it differs in some points, viz., in the regular arrangement and smaller number (9-10 pairs) of the pinnæ, in the arrangement of the branches of the spadix, the rachis being represented long, while in *trichospatha* it is short or nearly wanting, and (from the description) in the fruit being small. Wallace makes no mention of the fruit being hairy or setose, also in his description says simply, “Spathes elongate, fusiform,

spiny," but makes no mention of their being covered with a velvet-like pile.

Obs. 4.—*B. (Trichobactris) bifida*, Ersted (Naturahist. Forensk. Videnskab. Meddel., 1858, p. 44), approaches very closely to *B. trichospatha*, from which it differs only in the following points: "Pinnæ mediæ lineares . . . summis confluentibus . . . linearibus, apice bifidis; fl. ♂ pedicellati; fl. ♀, perigonia albicantia; ovario glabro." As the specific name *bifida* was pre-occupied when used by Ersted, another name must be assigned to his species; I would suggest the name *Erstediana*, in memory of its discoverer and first describer.

30. *B. incommoda* (Frail hb. Palm., 60).—Under this name I venture to describe a Palm which combines the characters of several others, agreeing as it does with *B. arundinacea* in habit, leaves, and armature, and with *B. trichospatha* in the inner spathe and peduncle of spadix being covered with short brown bristles resembling velvet, while it differs from the latter in the spadix bearing only three branches. It may prove to be a hybrid. I subjoin the description of the specimen:—

B. humilis aculeata; caudice $1.5^m \times .012^m$, ad internodia aculeis nigris compressis perpaucis armato; foliis 1^m ; vagina $.18^m \cdot 20^m$, ad latera versus apicem aculeis nigris compressis $.01^m$ sparse armata, petiolo $.35^m$, ad basin faciei interioris aculeis nigris tenuibus $.025^m$ et brevioribus armato; vagina, petiolo, et costa lepra badia vestitis; pinnis $3 \cdot 3\frac{1}{2}$ -jugis, 1-2-natim aggregatis, $.28^m \cdot 40^m \times .03^m \cdot 05^m$ (apicalibus $.40^m \times .08^m \cdot 10^m$), lanceolatis, subfalcato-acuminatis, marginibus sparsissime setoso-ciliatis, supra glabris, subtus ad venulas brevissime pubescentibus; spathe exteriore coriacea; spathe interiore $.26^m$ fusiformi, setis badiis velutina et aculeis brevibus compressis perpaucis armata; spadice $.22^m$, pedunculo aculeolis badiis obsesso, semierecto in ramos tres, $.05^m$ longos, ad apicem fisso; floribus —; fructibus —.

Hab.—In sylvis ad Paranaquara, fl. Madeira.

31. *B. Maraja*.—Caudicibus plerumque consociatis, mediocribus vel elatis (sub $7^m \times .015^m \cdot 04^m$), infra nodia aculeis nigris compressis armatis; foliis interrupte pinnatis, $1.5^m \cdot 2.4^m$, ad vaginas, petiolos, et costas subglabras, aculeis compressis badiis vel subnigris tandem medio expallidis, $.005^m \cdot 08^m$, e basi callosa nigra ortis, valide armatis; pinnis 9-14-jugis solitariis vel 2-3-natim aggregatis, subcrispis, lineari-vel obovato-lanceolatis longe subfalcato acuminatis, ad margines et supra ad venam mediam apicem versus setoso-ciliatis, supra glabris, subtus pallidioribus, et ad venulas plus minus paleis brevissimis obsitis; spathe exteriore bialata coriacea, interdum versus apicem aculeis sparsis armata; spathe interiore lignea, aculeis sparsis vel crebris, compressis vel compresso-triquetris, medio expallidis armata, inter aculeos tomento vel pubescentia albido-badia obsessa; spadice ramoso, pedunculo tomentoso (rarius aculeis sparsis armato), decurvo, compresso; rachi plus minus producta ramos 7-20 vel plures sursum attenuatos edente; drupa depresso-globosa rostellata, $.015^m \times .012^m$, glabra, atroviolacea; mesocarpio gossypioideo-pulposo, acido, dulci; endocarpio triangulari, sublenticulari; drupæ calyce et corolla, quam calyx duplo longiore, ore multifidis extus glabris vel brevissime et sparsissime pilosis; andrœcei vestigio nullo.