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SPECIES NOVAE IN BRASILIA BROMELIACEARUM - XX

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ABSTRACT

The authors describes two new species in the Bromeliaceae: *Bromelia gurkeniana* Pereira & Moutinho, species closely related to *B. tubulosa* L. B. Smith, from which it differs mainly in the width of the leaves, in the length of the leaf-sheaths, in the size of the floral parts and other details evident in the description; and *Fernseea bocainensis* Pereira & Moutinho, which is the second species described in this genus, differs from *F. itatiaiae* Baker mainly by its leaves narrowed toward the base, not forming pseudobulbs and by its dense inflorescence with sessile flowers among others features. As some specific characters were used in the original description of the genus *Fernseea* Baker, what would not let this new species to be placed under this genus, the authors propose an emend to the original description made by Baker (1889).

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Prosseguindo no estudo das Bromeliaceas brasileiras, os autores descrevem duas novas espécies para esta família: *Bromelia gurkeniana* Pereira & Moutinho, afim de *B. tubulosa* L. B. Smith, da qual difere, principalmente, pela largura das folhas, comprimento das bainhas e tamanho das peças florais, além de outras características enunciadas na descrição; e *Fernseea bocainensis* Pereira & Moutinho, que é a segunda espécie descrita para este gênero, diferindo de *F. itatiaiae* (Wawra) Baker, principalmente, por suas folhas estreitadas para a base, não formando pseudobulbo, inflorescência muito densa com as flores quase sésseis, além de outros detalhes. Devido ao uso de características específicas na descrição original do gênero *Fernseea* Baker, o que tornaria difícil a colocação desta nova espécie neste gênero, os autores propõem emenda na descrição original de Baker (1889)

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Em 1980, durante uma expedição, Luiz Carlos e Sergio Gurken coletaram nestas florestas que cobrem a Serra da Bocaina, numerosas bromeliáceas. Entre elas, uma era bem distinta de todas as outras já conhecidas. Após cuidadosos estudos na morfologia floral, concluímos que o gênero mais afim era *Fernseea* Bak., no qual propomos sua inclusão.

Esta planta tem sua distribuição geográfica, até o presente, limitada à Serra da Bocaina cerca de 1.400 m.s.m., e segundo informação verbal do Sr. Luiz Correia de Araujo, também encontrada próxima ao nível do mar, perto de Angra dos Reis, crescendo epifiticamente na floresta úmida. Ainda que não tenha sido coletada em outras regiões, provavelmente, outras coletas mostrarão esta espécie nas vizinhanças destas montanhas e até mesmo nas vertentes da Serra da Mantiqueira, logo abaixo do habitat da *Fernseea itatiaiae*. O mesmo pode acontecer com *F. itatiaiae* que poderia ocorrer nos pequenos e esparsos campos altimontanos da Bocaina. No entanto, as duas espécies possuem distintos habitats, sem qualquer superposição destes. *F. itatiaiae* vive como saxícola ou rupícula nos campos altimontanos e esta nova espécie é epifítica na floresta higrófila, sendo ambas distribuições condicionadas à ocorrência dos respectivos tipos de vegetação nestas vizinhanças. (Figs. 1 e 2).

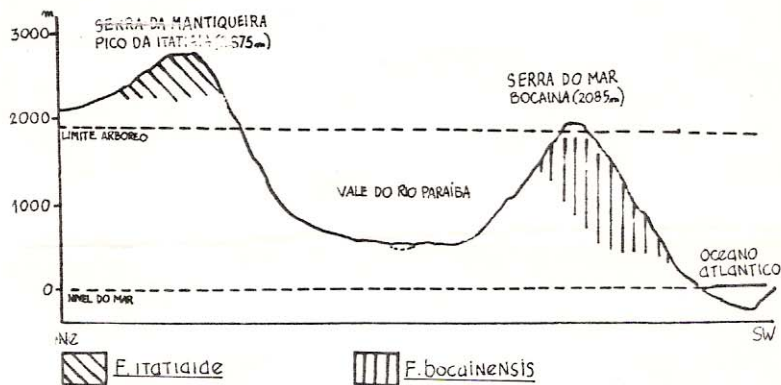


Fig. 1 - Corte aproximado do relevo na região entre o Pico do Itatiaia (RJ) e Serra da Bocaina (SP) - sentido NE-SW.

At the second half of the last century, Baron Heinrich Wawra Ritter Von Fernsee accompanied Prince Maximilian Von Wied-Neuwied and later the Princes August and Ferdinando Von Saxon-Coburg on their travels in Brasil. During both expeditions he had been collecting plants in the states of Rio de Janeiro, E. Santo, Bahia and Pernambuco, being sent all material to Wien. On his last travel he went to the Itatiaia summit where he found a new plant lately described under the name of *Bromelia itatiaiae* Wawra (1880). This plant was quite different from others from the same genus and that was noticed by Baker who proposed in 1889 a new genus where to put *Bromelia itatiaiae*, using as differential characters "its inflorescence, bract-like stem-leaves, cupular calyx above the ovary and long much-contorted stigmas", he described the genus *Fernseea* Baker, named after Baron Wawra Von Fernsee. The holotype of the genus is destroyed but it is well typified by illustrations, Smith (1979).

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Henceforth no other plant has been put in this genus, resting monotypical until our present time. The only one plant belonging to this genus was *Fernseea itatiaiae* (Wawra) Baker, which has a extremely limited geographical distribution. Found only at the Itatiaia summit and close vicinity at the Mantiqueira mountains, one of the highest Brazilian chains of hills, it lives in the rocky clefts of the high altitude grasslands as a saxicolous plant. These grasslands cover the top of the mountains from 1.800-2.200 m alt. although with often rains, the grassland flora, which *Fernseea itatiaiae* takes part, is characterized by drought resistant features since having a dry season, shallow soil, and intense solar radiation due to the altitude. Four species stand out among few others: *Cotaderia modesta*, *Chusquea pinifolia*, *Cladium ensifolium* and *Baccharis discolor*, and small trees that reach only 2-4 meters can be found (*Roupala impressiuscula*, *Rapanea gardneriana*, *Vismia micrantha* and *Buddleia speciosissima*) Rizzini, 1979.

As we go down, the grasslands are gradually surpassed by the rainy forest. These forests have great variety of species with trees reaching 30m alt. covered with epiphytes as Bromeliaceae and Orchidaceae. Further down we reach the Paraiba valley, at an altitude between 500-700m. s.m, where dry forests, almost destroyed nowadays, covers the two banks of the Paraiba river. Going southward the relief climbs up again, now the long chain of hills called "Serra do Mar" (sea mountains) rises up, facing the Itatiaia summit separated by the paraiba valley at one side, and the Atlantic Ocean at the other one. This part of the "Serra do Mar" is called "Bocaina" mountains (2.085 m alt.). The landscape of these areas is influenced by the wind pattern. Coming from the sea, the hot and humid air passes the shoreline and climbs up the hills. As it rises up its humidity condenses in the cooler air into mist or rain. These are regions of higher atmospheric humidity, with more or less strong precipitations during the whole year, covered with high rainy forests. At the lee side of the Bocaina Mountains the air is dry, without strong rains, and as it crosses the paraiba valley, the air gets moisture, which will be condensed again into mist or rain as it climbs up the "Mantiqueira mountains". Although covered by rainy forests too, the latter mountains are half as humid as the former ones (Hueck, 1972).

IN

At 1980, during an expedition, Luiz Carlos and Sergio Gurken collected in the forest covering the Bocaina mountains several interesting bromeliads. Among them, one was astonishingly different from all others already known, which after had been studied carefully in its floral morphology, was placed at the genus *Fernseea*.

This plant has its geographical distribution limited to the "Bocaina" mountains, from near the sea level at "Angra dos Reis" (Luiz Correia de Araujo, personal communication) to 1.400 meters high, growing on the trees of the rainy forest. Although not noticed in others regions, probably further collections will show this plant on the vicinity of these mountains, and even at the slopes of the Mantiqueira mountains, just below the *F. itatiaiae* habitat. The same might happen with this latter species, which could be found in the small grasslands at Bocaina mountains. Nevertheless the two species of the genus *Fernseea* have quite different habitats. *F. itatiaiae* grows as a terrestrial plant at the high altitude grasslands, and this new species grows epiphytically

in humid and shadowed rainy florests covering the mountainous alopes, being both distributions tied to the occurrence of the respective vegetations at the vicinity of these mountains.

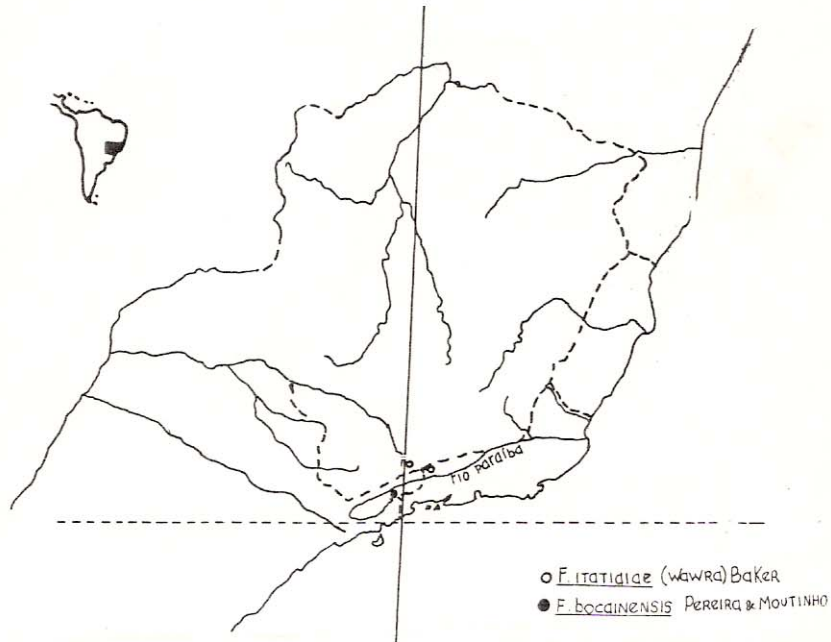


Fig. 2 - Distribuição geográfica do gênero *Fernseea*.

Gênero *FERNSEEA* Baker emmend. Pereira & Moutinho.

Planta rupiculae vel epiphyticae raro terrestres. *Folia* saepe plurima, laxa rosulata vel basi peradpressa pseudobulbo formantia; limbis spinosis. *Scapus* centralis. *Inflorescentia* simplex, racemosa; *bracteis floriferis* conspicuis. *Flores* hermaphroditi, subsessiles vel pedicellati; *sepalis* liberis subsymmetricis; *petalis* liberis, regularibus, eligulatis et sine rudimentis; *staminibus* per anthesim inclusis, liberis; *pollinis granula*, ut mihi videtur nec sulcata nec porata; *ovario* infero; *ovulis* plurimis, exappendiculatis. *Bacca* seminibus exappendiculatis.

FERNSEEA BOCAINENSIS Pereira & Moutinho n. sp.

Foto 1

Planta epiphytica, stolonifera, florifera ca. 70 cm alta, dense foliata. *Folia* rosulata ca. 80 cm longa, ligulata, super vaginam longe contracta sed non distincte peciolata, base nec pseudobulbo nec utriculo formantia; *vaginis* anguste ovalis, ca. 40 mm longis, 25 mm latis, utrinque medio superno bruneis denseque adpresso-lepidotis, margine minutis dense spinosis; *limbis* sublinearibus, ca. 75 cm longis, latitudine ut maxime 8 mm, apicem versus sensim angustatis capiliformibus descendentibus, supra glabris, subtus dense albo-lepidotis, saltem in statu sicco marginibus valde revolutis igitur cylindraceutis, margine laxe spinosis minutis praedita, apicem versus sensim evanescentibus. *Scapus* leviter curvatus, cylindricus, ca. 40 cm longus, 4 mm diamet., dense albo-floccosus, internodiis 40 mm longis; *bracteis scapalibus* infernis foliaceis, supernis lanceolato-acuminatis, omnibus inconspicuis spinosis vel integris, roseis, utrinque leviter pilosis, imbricatis, scapum occultantibus. *Inflorescentia* simplissima spicata, strobiliformis, cylindrica, ca. 50 mm longa, 15 mm diamet., rachi dense albo-floccosa, foliorum altitudinem non superans; *bracteis floriferis* ovalis, ca. 18 mm longis, 10 mm latis, concavis, roseis, basim versus carinatis, marginem versus dense albo-floccosis, apice acutis, sepalorum altitudinem superantibus vel aequantibus, flores amplectantibus. *Flores* ca. 20 mm longi, subsessiles, erecti, peradpressi, rachem occultantes; *sepalis* ovalis, ca. 10 mm longis, roseis, externo albo-floccosis, apice acutis, leviter asymmetricis, duabus posticis carinatis, antico ecarinato; *petalis* oblongis, ca. 12 mm longis, 4 mm latis, violaceis, subaequalibus. glabris, per anthesim erectis, apice acutis; *staminibus* inclusis; *filamentis* basin versus dilatatis; *antheris* linearibus, 4 mm longis, basi emarginatis, apice obtusis, infra medium dorsifixis; *stylo* antherarum altitudinem aequante; *ovario* trigono, 4 mm longo, albo-floccoso; *tubo epigynico* subnulo, ca. 1 mm; *placentis* interno loculorum angulo a basi usque ad apicem affixis; *ovulis* plurimis, nullo modo appendiculatis.

Typus: Estado de S. Paulo, Serra da Bocaina 1.200 m.s.m. Leg. Sergio e Luiz Carlos Gurken Nº 13, 10. Ag. 1980. Holotypus HB.

Esta nova espécie difere do *F. itatiaiae* Baker, principalmente, por suas folhas estreitadas em direção à base, não formando pseudobulbo, inflorescência muito densa com flores quase sésseis, além de outros detalhes.

This new species differs from *F. itatiaiae* Baker, mainly by its leaves narrowed toward the base, not forming pseudobulbs and by its dense inflorescence with subsessile flowers among others features.

BROMELIA GURKENIANA Pereira & Moutinho n. sp.
Foto 2

Planta florifera ca. 80 cm diamet. rosulae metiens. *Folia* 60-80 cm longa valde recurvata, super vaginam angustata sed haud manifeste peciolata, basi pseudobulbo formantia; *vaginis* ovalis ca. 25 mm longis, 15 mm latis, concavis, margine minute spinosa, medio superno utrinque dense brunneo-squamatis, squamae lineares ca. 4 mm longae, medio inferno glabris; *limbis* sublinearibus, 70 cm longis, ut latitudine maxime 10 mm, basim ad versus rubelo-canaliculatis, apicem versus sensim angustatis, capilliformis desinentibus, intimis inflorescentiam cingentibus, prope basi rubellis, supra glabris, subtus minutis albolepidotis *marginis* prope basi spinosa, spinae retrorsae 2 mm longae, in apicem versus dissitae et breviores. *Scapus* ca. 10 mm longus; *bracteis scapalibus* folia similiter sed brevioribus. *Inflorescentia* capitato-corymbosa foliorum rosulae centro insidens; *bracteis floriferis* ca. 25 mm longis, 7 mm latis, linearibus, apicem versus carinatis, margine serratis, dorso dense brunneo-lanuginosis, apice rotundatis apiculatisque, ovarii altitudinem superantibus. *Flores* sessiles, 55 mm longi; *sepalis* linearibus, 15 mm longis, ecarinatis, apice obtusis, dorso brunneo-lanuginosis, integris vel modice spinosis, 9 mm basi connatis; *petalis* linearibus, 35 mm longis, 22 mm basi connatis, albis, glabris, apice obtusis; *staminibus* inclusis, filamentis 2/3 corolla connatis; antheris linearibus, 5 mm longis, apice mucronatis, prope basi dorsifixis; ovario subcylindrico, 20 mm longo, dense brunneo-lanuginoso.

Typus: Estado do Pará, Rio Gurupi do Pará. Leg. Sergio Gurken nº 19, 19.set. 1980. Holotypus HB.

Esta nova espécie é afim de *B. tubulosa* L. B. Smith, diferindo desta, principalmente, pela largura das folhas, comprimento das bainhas e tamanho das peças florais, além de muitos outros detalhes enunciados na diagnose.

Dedicamos esta nova espécie ao Sr. Sergio Gurken, que muito tem contribuído na descoberta de novas espécies da família Bromeliaceae provendo-nos de material para estudos sistemáticos dentro desta família.

This new species is closely related to *B. tubulosa* L. B. Smith, but differs mainly in the width of the leaves, in the length of the leaf-sheaths and in the size of the floral parts.

It is dedicated to Mr. Sergio Gurken who has been contributing for the discovery of new taxa in the Bromeliaceae, always providing us with material collected all around in our country for systematical studies in this family.

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Os autores são extremamente gratos ao Dr. Lyman Smith, do Smithsonian Institution, pela sua inestimável ajuda em nossos estudos, sempre nos aconselhando e orientando quando se faz necessário; e à Sra. Dilza Andueza pela revisão do texto em inglês.

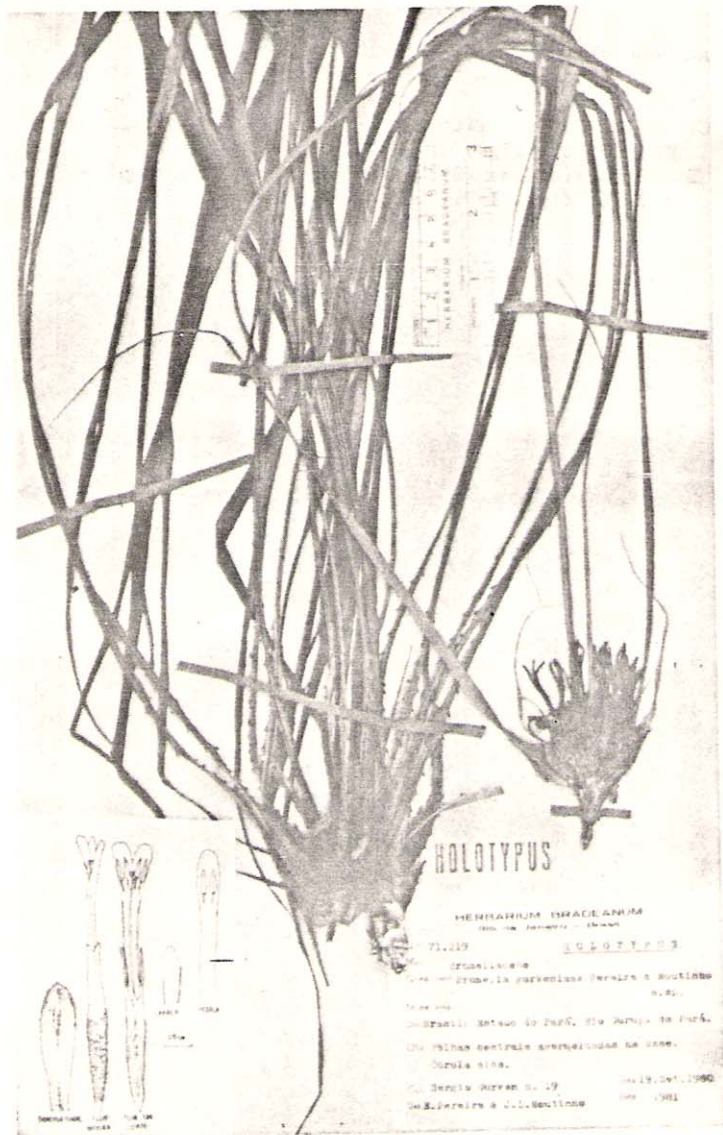


Foto 2 - *Bromelia gurkaniana* Pereira & Murtinho n. sp.