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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

From Merrill

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

January 16, 1906

Dr. E. Hackel,
Graz, Austria.

Dear Sir:

I am sending you by parcels post today through Mr. Kneucker a package containing about 100 specimens of Philippine grasses from my own collection recently made (Oct. Nov. 1905) in the highlands of northern Luzon. From a study of some of the material, and casual examination of other specimens, there appears to be considerable of interest in the collection, especially in northern types. Several hundred square miles of the Benguet and Lepanto country form an elevated highland, most of it above 4000 feet altitude, the characteristic species of the region being *Pinus insularis*. Such northern types as *Viola*, *Anemone*, *Ranunculus*, *Solidago*, *Aster*, *Anaphalis*, *Gnaphalium*, *Primula* and many other genera of the northern regions are found, while such Australian types as *Stypelia*, *Phyllocladus*, and *Podocarpus* are found at the higher altitudes. The pine belt extends from as low as 2500 feet in the Agno valley to 6800 and even 7000 ft. on some of the mountains. The high ridges and peaks above 6800 ft., are however densely covered with forests in which *Quercus* predominates, the ground and trees being thickly covered with mosses, lichens and epiphytic plants. On the labels I have called this the "mossy forest". I spent 28 days on the trip from Manila to Cervantes, overland, and return, and although travelling on foot nearly every day I managed to secure and prepare some 900 numbers of plants, the grasses being forwarded to you now, a complete set except some common cultivated species such as wheat, oats and barley.

I have left the *Andropogoneae* entirely to you, having made preliminary identifications only where I thought I recognized the species. I have not compared these with the descriptions. In the other groups I have made tentative identifications, and have indicated some possible new species on which I would like your opinion, if you will be so kind as to look over the material.

Calamagrostis, genus new to the Philippines, unless Villar's enumeration of *C. quadriseta* can be verified. Of this I have apparently 3 species: 1 *C. pinetorum* No. 4564

2 *C. philippinensis* No. 4701 Larger spikelets and different insertion of awn than preceeding.

3. *C. filifolia* Nos 4537, 4715, and 4839. I have however no material from China, Japan etc. for comparison, and some of these may prove identical with northern forms.

Sporobolus piliferus Kth. new to the Philippines 4718, 4362. But see *S. humilis* Presl (Luzon) and *S. ciliatus* Presl (Panama)

Perotis rara R. Br. (4447) Is this *Xystifium maritimum* Trin.?

It seems sufficiently distinct from *P. latifolia*.

Panicum villosum Lam. (4360) apparently identical with No. 2601 Barber, Octacumand, India, so named in herb. Manila.

4473 *Panicum patens* Linn. Is *P. carinatum* Presl the same?
 4478 *Panicum trypheron* Schultes. But compare No. 3107 Merrill with this, a specimen having been sent you previously, and determined as *P. trypheron*. The two numbers appear to be distinct. What is *P. luzonicum* Presl?
 4459 *Panicum javanicum* Poir? Compare with specimen from Buitenzorg enclosed with this number.
 4281, 4596 *Panicum* n. sp.? but see *P. argenteum* R. Br. (specimen from Buitenzorg so named, enclosed with above) If these are really *P. argenteum* R. Br., another interesting connection of the Philippine and Australian floras is shown.

4830, 4536, 4698, 4710 *Festuca* n. sp. Genus new to Philippines.

4714 *Festuca*? See few nerved fl. glumes and rachilla produced as an empty glume only.

4288 *Poa annua*, apparently. Certainly introduced! found near a construction camp along the new road, but well established here, seen in only one locality.

5712 *Poa* n. sp. In cold open meadow on grassy damp bank of stream, very rare, alt. ~~XXXXXX~~ 6800 ft. The locality "Pauai" is an open grassy meadow at 6800 ft. Heavy frosts are frequent for four months of the year, while thin ice frequently forms during two or three months of the year. It is above the limit of successful cultivation of rice, sweet potatoes etc. and is an unsettled region, that is no native houses in the vicinity. Sphagnum moss is abundant in the thickets bordering the meadow. Here I also found the *Anthoxanthum*, mentioned later, *Ranunculus*, *Viola*, many species of *Carex* etc.

4713 *Anthoxanthum* n. sp. With the preceding, very rare. I have no specimens of *A. odoratum* for comparison, but from the description of that species, the present form is distinct. It appears to be *Anthoxanthum* rather than *Hierochloa*. Like the preceding a very interesting northern type for the Philippines, the genus new to the Archipelago. Very fragrant in drying. There is no possible chance of this or the preceding species having been introduced I believe.

4716 *Garnotia stricta* Brongn. "*G. longisetata* Merr" in herb. What is *Garnotia patula* Munro, and the var. *mutica* Rendle (Forbes & Hemsl. Enum. Pl. China 3:386.) in relation to the Philippine species identified as *G. stricta*?

4831, 4696, 4543. Habitat various, on dry open grassy slopes in thin pine forests and in very wet places in open lands. I cannot satisfactorily place this, and think it may possibly be a N. gen., for which I might use the name ~~XXXXXXXXXX~~ "*Curtigluma*", in reference to the minute empty glumes. I cannot however satisfactorily interpret the first large glumes, which also appear to be empty. I suppose the grass is in the *Festuceae*.

In addition to the above there is in the package a dwarf bamboo found in sphagnum moss, but unfortunately sterile. Several species of *Isachne* are represented, some of which may be new. *Coelachne hackellii* Merr. from the type locality, and undoubtedly from the same stream that Mr. Elmer collected it originally. Some of the *Andropogoneae* I have never seen before, and may prove of interest. Several specimens of *Agrostis elmeri* Merr. are represented, which may help determine the validity of that species. I think it may be identical with the form enumerated by Rendle in Forbes & Hemsl. as *A. perennans* Tuck., whether or not Tuckermans species.

I should esteem it a favor if you will write up diagnoses of new species, and notes on interesting forms in the present collection and let me have the same for publication in the new Philippine Journal of Science, the first number of which has just been issued, of which a sample

copy was sent you a short time ago. I should like to write up the descriptions of some of the species I have indicated as possibly new, and will publish them in a joint paper with you, or as a separate paper. I should however be greatly obliged for your opinion as to the validity of the species I have proposed, as I have little material here for comparison, and lack much essential literature. I should of course give you full credit for your assistance.

The diagnoses you sent some time ago should have been issued in December, and I am looking for the issuance of the publication containing them every day. There has been some delay in the printing office. In the new serial (Phil. Journ. Sci.) I shall try to secure as many contributions as possible to Philippine botany, and authors will receive free 100 copies of their contributions as "separates". Papers will be printed as received, and a clear copy is desired, as I have to make a typewritten copy for submittal to the printing office.

Other than the species I have indicated, I will leave the matter of working up the material sent to you, entirely at your discretion. Whatever you write up might include also mention of any other interesting Philippine forms you have, either in material I have sent you, or that you have from other sources. I am now working on the distribution of some 1300 numbers of the collection of Whitford, and will send you a set of the grasses in the course of 10 days or two weeks. In this collection however, grasses are poorly represented, and I suppose most of the species are common forms.

I trust that you will receive the material in good condition, and that you will find something of interest in the collection.

Very truly yours,

Emil Menzies
Botanist.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

Jan. 17, 1906

Dr. E. Hackel,
Graz, Austria

Dear Sir:

I am sending you today a copy of the publication in which the diagnoses of Philippine grasses submitted by you appear. This was issued today, but should have come out in December. I shall try to have "Separates" printed, in which case I will send you a quantity of your paper. Failing in this I will later send you a number of copies of the entire publication. I trust that the form of publication is satisfactory to you. As I wrote you a few days ago, all our future publications are to appear in a serial, "The Philippine Journal of Science".

Very truly yours

Elmer Merrill

Botanist.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

March 31, 1906

Dr. E. Hackel,
Graz, Austria.

Dear Dr. Hackel:

I am sending you today through Mr. Kneucker as previously one package containing about 70 specimens of Philippine grasses, duplicates from various collections, mostly those of my own collection. This completes the duplicates of grasses on hand, and I cannot send more until other collections are made, though I now have two men in the field and am receiving from time to time miscellaneous collections from various persons. As material is received in the future I will lay aside specimens for you, even though the material may represent species already sent you, as I am sure you will value such material as showing variations and distributions of species.

The package was made up yesterday and this morning I received your letter of February 22nd with the copious notes on material previously sent you. Your letter covers several points that I have queried on the labels of the material sent today, but I did not think it worth while to open up the package and correct my labels in accordance with your list of identifications received today. In the package you will find representatives of several species of Bamboo, probably some undescribed species, also more material of the *Dinochloa*-*Schizostachyum* lot. Also what I take to be typical *Dinochloa tjankorreh* Buse, and also more material of the

small leaved *Dinochloa*, related to *tjankorreh*, previously sent you from Mt. Mariveles. I presume that this may prove to be a new species, as on the material I collected only about 10 days ago on Mount Maquiling (specimen sent) the leaves are constantly very much smaller than in typical *tjankorreh*.

I find the bamboos here most perplexing, and so far have found none, or at least but one or two of the arborescent species in flower. The scandent species of *Dinochloa* and *Schizostachyum* appear to flower much more often than the erect species. In regard to Blanco's *Bambusa diffusa* I may have made an error in taking up his name, but in all the scandent species I have observed in the field I have so far not found one with leaves pubescent beneath, except in some cases where the leaves are young, and then they soon become quite glabrous. It may be best to abandon Blanco's species entirely, or at least to wait until possibly some time in the future material is secured that agrees more closely with his description. Like you I am puzzled regarding the relationship between *Schizostachyum acutiflorum* and *Dinochloa dielsiana*--it seems possible that they are the same. Later field observations and more abundant material may clear up this point.

I was very much interested in looking over your letter of Feb. 22nd as it clears up many obscure points, that one located as I am without authentic material for comparison, and lacking many descriptions of Malayan species cannot hope to clear up. I am very glad that you included so many notes on synonymy, and hope that you will continue to do so. In the material from Northern Luzon mentioned in your letter as not having been received I am sure that

you will find very much of interest. Being naturally especially interested in grasses I of course am able to observe the different species in the field that a less experienced man would overlook or confuse with other species. Sometime I hope to be able to get into the high lands again for a longer period, but once there one has long "hikes" overland (i.e. walks) through a very rough country inhabited only by uncivilized Igorots who in some sections have head hunting proclivities. One must take not only his field presses and paper, but also tent, blankets and food. In my 28 days from Manila last October and November I secured approximately 1000 numbers of plants, and collected no vascular cryptogams, leaving these entirely to Dr. Copeland who accompanied me. We had many dangerous rivers to cross, mountains to climb, and long walks, often as high as 25 to 30 miles in a day, from dawn to dark, collecting as we went along. Though a very hard trip, it was a most interesting one, the scenery being magnificent, the vegetation interesting, and the climate delightful.

I had thought of preparing soon a treatment of the Philippine Gramineae, but as I expect to leave here shortly after August of the present year it will perhaps be best to postpone this until my return to the Philippine^s when I will have more material and literature. In the meantime it may perhaps be well to publish some preliminary articles. I have indicated some possible new species in the lot being sent today, but it may be best to leave these entirely to you as also those indicated in the material sent previously. Some time ago I wrote you as to the possibility of your preparing a paper of the interesting grasses for publication in our new "Philippine Journal of Science". I should be very much

gratified if you will do so, and will leave everything to you. The paper will be printed in exactly the form submitted and 100 copies will be sent you free. I now have in press an extensive paper on the Flora of Mount Mariveles, while Dr. Copeland has nearly finished one on Philippine ferns. Dr. Christ is also to publish on Philippine ferns here and Dr. Schlechter on Asclepiadaceae. Clarke will publish Philippine Acanthaceae here and a few days ago I received an offer from him to prepare a Prodrromus of the Philippine Cyperaceae which I shall accept. Negotiations are on with several other specialists from whom I am expecting favorable answers.

Your German proverb regarding the oak is like our English one "Rome was not built in a day", and I feel that I have made satisfactory progress here during the four years that I have lived in

Manila. I have established a fairly complete botanical library, starting without a single book, and an herbarium exceeding 30,000 mounted sheets, and am receiving approximately 10,000 sheets per year, largely Philippine. The routine work has been enormous, as one cannot depend on the native assistants to do things properly.

If I leave here this year as I hope to do, I hope to be able to spend several months in Europe studying Philippine types in various institutions. This plan is however only tentative although I am practically sure of getting to Kew and Berlin.

I trust that you will receive the material forwarded today in due time and in good condition, and that you may find something of interest in the collection.

Very truly yours

Edmund Menill
Botanist

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

May 15, 1906

Dr. E. Hackel,
Graz ,
Austria.

Dear Sir:

I have just received your post card of April 9th, and am glad to note that you are finding some species of interest in the Benguet gramineae. As material comes in I am laying aside a set for you, of both the common and the more rare species. I hope to be able to send you another package in the course of two or three weeks. Recently I have sent several numbers to Kneucker for his "Gramineae exsiccatae", which no doubt you will see.

A few days ago I sent you a copy of the first paper on systematic botany to appear in the new "Philip. Journ. Science", which will give you an idea of the general style of the new publication. I trust that you will favorably consider publishing on Philippine Gramineae here.

Very truly yours

Elmer Merrill
Botanist.

from Merrill

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

June 22, 1906.

Dr. E. Hackel,
Graz,
Austria.

Dear Sir:

Some days ago I received your letter of April 25th with notes on Philippine grasses and diagnoses of several new species and varieties. I will publish later the diagnoses and notes on interesting species in the Philippine Journal of Science, probably in about September of this year. If there are any interesting forms in the last material sent you, I can also include these in case your identifications reach me in time.

Is not my *Garnotia longisetia* identical with your *G. angustata*? As neither has really been "published" I think your name should be adopted. I will try to select for you a better and more complete specimen of the *Bromus* No. 4714 which you think may be the same as *B. pauciflorus* of Japan, and sent it to you in the next package that I shall be forwarding before long. I haven't done anything with the *Panicums* No. 4396 and 4459 (*P. villosus* subsp. nov., and No. 4281 which you think a possible n.sp. I would rather leave them to you. In recent material received from Mindanao I find one of these forms and also *Andropogon fragilis* var. Also cannot you send me a diagnosis of *Schizostachyum hirtiflorum* Hack. n.sp.? I have another specimen of this from Cagayan Province and still another from

Nueva Viscaya. Shall send you specimens later.

In the next lot to be sent you will be perhaps 50 or 60 numbers of grasses, some of which will undoubtedly be of interest.

Very truly yours

Elmer D Merrill
Botanist.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

July 23, 1906

Dr. E. Hackel,
Graz,
Austria.

July 26-1906

Dear Dr. Hackel:

I have just received your letter of June 15th with identifications and notes on the collection of grasses sent you several months ago. I am very greatly obliged to you for the list. I agree with you in the matter of not caring to describe Bamboos from incomplete material, and hope sometime to be able to supply you with abundant material of at least a few of our species.

Some time ago I sent Mr. Kneucker several numbers of grasses for his "Exsiccatae", among them one labelled *Leptochloa chinensis*. On examining the specimens, when I was distributing the material I found the identification to be quite wrong, the plant being a *Diplachne*, probably *D. fusca*. The material will probably be submitted to you anyway.

Little material is coming in just now, the rainy season being on, but as specimens are received I am laying aside duplicates of the grasses for you.

Very truly yours

Elmer Merrill
Botanist

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

Oct. 24, 1906

Dr. E. Hackel,

Graz,

Austria.

Dear Sir:

In my absence from Manila in the southern Islands, the paper I compiled from your identifications of Philippine grasses was issued, and 100 "separates" were sent you by mail about 10 days ago by the mailing clerk. I trust that the package will reach you in due time and that you will be satisfied with the method of presentation.

I have a considerable collection of grasses laid aside for you and found several species new to the Philippines on my recent trip south. I shall send you another lot as soon as I return to Manila from my next trip, which is to be an ascent of Mt. Halcen, Mindoro, and which will take about a month, the mountain being far inland and with no trails leading to it, and one of the highest in the Philippines. I expect to leave Manila in about a week.

Very truly yours

Elmer D Merrill

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

January 21, 1907.

file 27

Doctor E. Hackel,
Wastlergrasse 11,
Graz, Austria.

My dear Doctor Hackel:-

I enclose herewith a letter written by me October 24th, 1906, to you, which was returned to me because of insufficient address. The letter will explain itself.

In the near future I shall send you, through Mr. Kneucker, a considerable collection of Philippine grasses, duplicates from material that has been received in this office within the last few months.

Very truly yours,

Elmer Merrill

Botanist,
Bureau of Science.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

May 9th, 1907.

Dr. E. Hackel,
Attersee, Ober Osterreich,
Germany.

Dear Sir:-

I am sending you by Parcels Post today,
through Mr. Kneucker, 111 specimens of Philippine
grasses, duplicates from material recently collected.

I trust that this material will be received
in due time, and in good condition.

Very truly yours,

Elmer D. Merrill

Botanist.

E.D.M./M.

P.S. I am leaving Manila on 25th Inst.
for 10 months vacation - My address up to
the middle of October will be c/o Dr F
V. Coville, Dept. Agriculture, Washington
DC
EDM

From Merrill

by Merrill, E.D.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

BOTANIST.

April 10, 1908.

Dr. E. Hackel,

Attisee,

Ober Osterreich.

Dear Sir:

I wish to thank you for your letter of February 25th giving me identifications of the grasses that were sent you previous to my departure from Manila and a diagnosis of the new species and varieties.

These have been copied and will be published in a future number of the Philippine Journal of Science. Are you quite sure regarding the identity of *Panicum oryzoides* Sw.? I have no doubt that my Balabac plant No. 5387 is identical with *P. latifolium* of the flora of ^{British} ~~India~~ India, but while I was at Kew I found specimens there that you had named *P. Ridleyi*. While I was working up my paper on Philippine grasses I suspected the Balabac plant to be identical with the latter, but could find no published description of it. In the hope that Mr. Hitchcock had opportunity of examining the type of *P. oryzoides* while he was in Europe, I have sent him a specimen of the Balabac plant asking his opinion of it.

On my return I find that extensive collections have been made during my absence, including a considerable number

Dr. E. H. #2.

of grasses. A set of the latter has been selected for you and will be forwarded at some future date as soon as I can clear up the accumulated work. I think, however, that there are comparatively few interesting species in the lot, except possibly among the bamboos.

Very truly yours,

Elmer D. Merrill

Botanist.

ED M-HJT.

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

OFFICE OF THE DIRECTOR OF THE BUREAU.

Feb. 10, 1909.

Dr. E. Hackel,
Attersee,
Austria.

Dear Dr. Hackel:

I enclose herewith a Deschampsia, regarding which I should value your opinion, as I have not sufficient material here for comparison to be sure of its identity. It seems to me to be allied to *D. flexuosa*, and to *D. caespitosa*, but nearer the former, although with differently colored and larger spikelets than on any of the specimens so named in our herbarium. I note that Hemsley reports only *D. caespitosa* from China, but Hayata reports both *D. caespitosa* and *D. flexuosa* from Mount Morrison, Formosa.

I have just received several hundred numbers of plants from Mt. Pulog, which is the highest mountain in Luzon, and probably even higher than Apo in Mindanao, which hitherto has been considered the highest mountain in the Philippines. Just now I am working up the entire paper with view to publication later, and the enclosed specimen is the one interesting grass in the lot, as it adds another genus to the Philippine flora.

Very truly yours

Edmenill

Botanist.

*The specimen need not
be returned - com*

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

OFFICE OF THE DIRECTOR OF THE BUREAU.

May 21, 1909.

Dr. E. Hackel,

Attersee, Austria.

Dear Sir:

I have just received your letter of April 4th regarding the *Panicum* I described as *P. crassipiculatum* and from the fragment which you kindly enclosed in your letter I can at once see that it is the same as *Fridleyi*.

I had previously sent specimens to Mr. Hitchcock in Washington, and he writes me that it does not compare with any of the types of American species that he found in European herbariums.

Thanking you for your kind letter regarding the matter, I am,

Very truly yours,

E. Merrill
Botanist.

EDM-HJT

DEPARTMENT OF THE INTERIOR.
BUREAU OF SCIENCE.
MANILA.

OFFICE OF THE DIRECTOR OF THE BUREAU.

July 16, 1909

Dr. E. Hackel,
Attersee,
Austria.

Dear Sir:

I am greatly obliged for kindness in reporting at length on *Isachne stricta* Elm., in your letter of June 6th, recently received. I recognized the affinity of the species with *I. albens* Trin., but was not at all sure just how it could be separated from Trinius' species, as there was little material here for purposes of comparison.

Very truly yours

E. Merrill

Botanist