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Telephone: 412-268-2434

Email: huntinst@andrew.cmu.edu Web site: www.huntbotanical.org

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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.

ÚSTAV BIOLÓGIE KRAJINY

Slovenskej akadémie vied Výskumná stanica — Banská Štiavnica čts. popis. 110/III. čts. tel.3153 Lytl June
Banská Štiavnica
Číslo:

by dear Si Kelso, to give , please, my orday in auswe ring your kind latiers. I was for 11 weeks out long Int and now (at lowe)) am not able All to go. He fracher itself 13 o-li, but there are hig difficulties in stood of wellahow of the log and am not able I gather a Living horicus called "Conplain" for reserring versels. Borideo all, on my grad Whe are arent to, maline any accounts to go very a finall. Theo- for the growing year I saraly ear do anything in field. Escanos Jains) am not able to work (and over read for eraper time). I lave fet of modrandy his excellent Syrame Loogsopays, - Tracky today we are marry t you the pourse (Just before my occident) two vols of gazors road at last lum'air oun'that. conforme. Forger, please, In He We lave a fino June lose, with delay tompratures over 30°C. Hunt Institute for Botanical Documer

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UNIVERSITY OF NOTRE DAME COLLEGE OF SCIENCE NOTRE DAME . INDIANA . 46556

DEPARTMENT OF RIOLOGY

GENERAL OFFICE (219) 283-6552

What started it will.

December 8, 1976

Dr. L. Kelso 1601 Argonne Pl. NW 351 Washington, D.C. 20009

Dear Dr. Kelso,

Thank you for your kind response to my inquiry concerning translations of Russian phytosociological writings. I would be interested in seeing the translation of the chapters of Dr. Alexsandrova's book and happy to provide you with a Xerox copy. I am concerned if these are your only copies about entrusting them to the mails. If this is the case and you chose to send them, please register the mail and I will reimburse you for the Postage. I am guessing that the translations are not so lengthy that it will be difficult to mail them, that is on the order of a hundred or so pages.

I think that you and Jack Major must be about the only American ecologists who follow the Russian Phytosociological literature. I am curious how you happen to be interested in it?

I enclose the Alexandrova letter you sent me.

Sincerely yours, P. Mentah

Robert P. McIntosh

RPM:si

L. K. Issued November, 1974



Classification of Vegetation.

Principles of classification and classification systems of various phytocenological schools. Transl. L. Kelso

V. D. Aleksandrova. "Nauka" Publishing House. Leningrad. 1969.

WHAT IS CLASSIFICATION ?

p. 5-11

There is no problem in geobotany which can evoke so much discussion and so much contradictory literature as the subject of classification of vegetation. In the scientific world there is no unity of opinion, either as to the basic principles of classification nor in makeup of a classification system, nor in modes of gathering field material and its treatment. The disagreement involves both the basic idea as well as the methods, and the sharply discordant terminology. To look into this complex situation critically, one must define first of all what we mean by classification, what tasks are undertaken in classification, and what requirements are satisfactory for these tasks.

Classification is a logical operation which involves the separation of a given multiple of objects into submultiples, or classes wherein by class we mean an aggregation of objects having common characters distinguishing robjects of the given class from other objects which do not have such characters. Classification of plants for example is defined as a "logical operation consisting of separation of the whole multiple of organisms examined according to their constituent resemblances and differences into separate submultiples or groups, called taxons." (Taktadzhyan, 1966: 34.) Notwithstanding the consistent logical basis of procedures of classification for any objects, classification of plant communities has, in comparison to

classification of plant organisms, certain peruliarities and difficulties.

To expose these difficulties, clearly define and critically examine them, it is necessary to deal with some logical aspects of the classification problem.

The concept of class is logically mutual to the category concept; classification standing in close proximity to the separation concept. Therefore on the class category we must always keep in view the law which logic holds for the category concept: the rule of concept defining species and the interrelation between concepts by or as to essence and by volume, the rule of limitation and inclusiveness of concepts, the rule of concept definition, and the rule of separation of concepts. So, for example, leaving aside the old dispute between partisans of the Upsala school on the one hand, DuRietz et al., and the Zurich-Montpelier school, Braun-Blanquet et al., as to whether we should regard the plant association as a "concreteness" or an "abstraction" (in the concrete or in the abstract), cf. p. 49, or regard the problem of naturality of defined units by presence of the transitions among them (cf. p.231), it is yet requisite to deal with the fact that each concept has two logical characteristics: essence and extent, or content.

The essence element comes from the aggregate of essential characters of the item, the mental picture of which is the concept. As content we mean the sum total or aggregate (multiple, class) of those items included in this concept. Thus the content of the concept of "Common Pine" (Pinus silvestris) would be all the specimens of this pine occurring on our terrestrial sphere; the essence (context) of "Common Pine" would be that group of characters which distinguish this pine from all other items or phenomena. As to plant associations of "Pinetum cladinosum" the content of the concept would be the total aggregate of members of the plant cover belonging to that association; the essence of the same concept "Pinetum cladinosum" would be the aggregate of characters distinguishing this association from other items or phenomena, and in particular from other associations of Pineta formation.

For especial attention is the rule for defining concepts, since definition of concept is determined as that logical operation by which the essence of the defined concept is arranged in certain classes from the viewpoint of the determined basis of the definition (Legica, 1956: 64), from which it follows that the logical operation

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For especial attention is the rule for defining concepts, since definition of concept is determined as that logical operation by which the essence of the defined concept is arranged in certain classes from the viewpoint of the determined basis of the definition (Logica, 1956: 64), from which it follows that the logical operation

of defining a concept is the basic act of classification. For example defining the concept: all angiosperm plants (Magnoliophyta. or ospermae) are divided into dicotyledonous plants (Magniolatae or Dicotyledones) and monocotyledonous plants (Liliatae, or Monocotyledones). Here it is impostant not to confuse the operation of defining concept with the operation of dissection or analysis. Analysis or breakdown is a logical operation of quite another nature. the essence of which is not the breakup of a multiple into classes. but the definition of a whole into parts. As an example of breakdown: the timber stand of a pine grove consists of certain individuals of Pinus silvestris, or - a year consists of twelve months. In case of definition of essence of a defined concept. one must conform with the items within the scope of the members as defined. Thus, while we deal with the definition: "all angiosperms are divided into dicotyledons and monocotyledons" the assertion that "a dicotyledonous plant in an angiosperm " would be true. On breakdown, the same element contained could not be asserted for the whole. Thus, there is no asserting that " a particular individual of Pinus silvestris is a pine grove timber stand. "or that " a month is a year"; such an assertion would be nonsense. The difference between an operation of defining concept, and an analysis of the whole is logically the basic difference between classification and district mapping. We note however, that after a mode of analysis of the whole is defined, by some concept. yet if they form a definite multiple, they may be converted into an analysis operation, i.e. classification. Thus, months may be separated as winter and summer; a multiple of defined areas may be classified by some feature. D. Arman& (1964) distinguishes "typological area mapping" and "individual (regional) area mapping".

In the paper cited, written by a geographer, but of considerable interest for geobotanists, the author observes; "In logic operations like individual mapping, in contrast to defining concepts, (classification) there is designated portions of the whole into parts and examined in the divisions, modes similar to division". The difference between the two similar operations may be shown by the following example. The generic concept "mountain" is divisible into classes: high, medium, low or - folded, faulted, or residual. Concretely the same mountain (individual) may be dissected by elements: summit, slope, foothill, or surface, or interior". (Armand, 1964: 46).

To the category "typologic demarcation" belong typization of macrocombinations in the sense of T. Isachenko (1966; Gribova & Isachenko, 1968).

The term "classification" is used by different authors in different contexts. Sometimes there is seen a tendency to narrow the classification concept by drawing limitations, in consideration that classification is to be regarded as only an arrangement of items by classes in which the latter form a system of hierarchic series. However such a restriction of context of classification could hardly be sound since in the practice of scientific research since the classification concept is usually employed in a broader sense. In the paper cited above Armand writes: "By classification we mean on the one hand a logical operation including division of some generic concept into classes by character of similarity of objects included into one class, and their differences from objects included in other classes, on the other hand- a system of comparable classes of different rank, derived as the result of this operation." (Armand, 1964: 351). Authors dealing on the concept of classification by elaborating theoretic problems by electric computers as of problems of machine identification or search (Braverman, 1960; Bongard, 1961; Brailovskii,

1962: Wharkevich, 1963; Arkadev & Braverman, 1964; Yakushin, 1964: Nilsson, 1965: Nilson, 1967; et al.), operate on the classification concept taking necessary and adequate its characters as broken up of a multiple into mutually exclusive classes. For example B. Yakushin (1964) "Glassification and computer search of literature" gives the following definition of classification: "The classification concept may be regarded as an arrangement of some multiple of concepts, where each of them in some way is included in a particular class to the exclusion of others." (1. c. 259.) The same context concept of "classification"is used mathematically (cf. Baer, 1932; Anderson, 1963; 1967). V. I. Vasilevich (1966b) in discussing the nature of natural classification, defines the latter as a breaking up of a multiple of objects into classes on the basis of common characters. Whittaker writes that aims of classification of vegetation "in the ideal" should be a grouping of all the phytocenoses (stands) of a given area into mutually exclusive classes(1962; 114.). Gilmour and Walters (1964) in discussing problems of classification as related to designing systems of world vegetation in the leading paper of "Vistas in Botany" holds a classification concept of broader sense and includes elements of various degrees of complexity. At one end of the scale stand the simplest acts of classification, which we do for example when we give names to some group of objects and thereby separate all the objects into two classes: thus, in calling a group of objects by the name of "plants" we at the same time classify all objects as "plants" and "non plants". At the other end of the scale stand the most complex acts of classification; to this number belong construction of formal patterns for grouping multiples of objects into a hierarchy of classes; for example, class construction of whole plant and animal worlds. In all cases the act of classification consists in grouping objects into classes on the basis of certain common characters. In just that sense we shall use the term "classification" in this book.

In building a system of classes we are dealing with the most complex case in classification, to wit, the systematics of objects. Thus, we note that the system may be hierarchic, i.e. consist of "hierarchic classes of various rank" (Armand, 1964), but it may also be otherwise; a classic example of a nonhierarchic system is the Mendeleev periodic system of the elements.

Construction of a system of classes is impossible without a <u>taxonomy</u>, i.e. a doctrine of taxonomic categories (De Candolle, 1813; Takhtadzhyan, 1966: 34).

In explanation of the relation between concepts: classification. taxonomy, taxon, and taxonomic category we give the following statement from the book of A. L. Takhtadzhyan (1966). "The most important aim of taxonomy is primarily that of building that hierarchic system of taxonomic categories which will be most suitable for the classification of the organisms. Classification is a logical operation consisting in subdivision of the subject multiple of organisms as a whole according to their evident similarities and differences into distinct submultiples or groups, called taxons. A taxon is a definite group of organisms regarded as the formal unit at all levels of hierarchic classification. In other words, a taxon is a multiple, the elements of which are the finite organisms. In contrast to the taxon of taxonomic categories is the multiple the members of which are all taxons at a given level of classification hierarchally ... The concepts "taxon" and "taxonomic category" should be strictly differentiated. Thus the Common Pine cannot logically pertain to the taxonomic category of "genus" or "species" but it belongs to the taxon Pinus, as to the elementary genus category, and to the taxon Pinus silvestris as to "species "category" (Takhtadzhyan, 1966). Turning to an example from the field of phytocenology we note that a

of lichens of genus <u>Cladonia</u> will belong to the taxon Pinetum cladinosum - an element of taxonomic <u>Oategory "association"</u> and to the taxon Pineta silvestris, an element of taxonomic category "formation"; other examples may be seen in table 7, where there is given a review of units of the Braun-Blanquet system: in the graph "rank" indicates taxonomic category; and the examples indicate taxons.

For its importance to geobotany for the methodic viewpoint it is desirable to dwell on the difference between deductive and inductive modes of classification. In the deductive method dissection into classes proceeds starting with the higher taxonomic ranks of the hierarchic system. By this mode of examination at the very start should be known all the various objects and their features, from which one may chose those suitable for implementing the classification.

Examples of classification derived by the deductive method are the physiognomic and ecological classifications of vegetation worldwide of Schimper (1898), Diels (1908), Brockmann-Jerosch & Rubel (1912),

A. P. Ilinskii (1937), Kuchler (1949, 1967), Ellenberg & Mueller-Dombois (1967b), and V. B. Sochava (1964a, 1964b), & 1964c).

In the inductive method the classification system starts brilding from the lower taxonomic units. In this case the examiner does not at first know the characters which he will use as bases for distinguishing this or that taxon. This information he gradually accumulates in course of examination of the unit objects. As examples of the inductive method of classification in geobotany may be noted the classification by Braun-Blanquet (1928b, 1964) and the mathematical method founded on a theory of cumulative analysis (In USSR this mode was developed by V. I. Vasilevich (1962a, 1969), T. Frey & L. Vohandu, (1966; Frey, 1966b, 1967a,b, 1968b).

As in the former, so in the latter case the logical basis of classification is an operation of separating concepts, but the inductive method differs in that the concept is not given ahead in all its essence but is formed gradually in process of becoming acquainted with unit objects whereby the essence and content of the concept varies with coming of new information.

Now we proceed to examination of features which distinguish phytocenotic items as objects of classification.

It is extremely important to emphasize that feasibility of making a classification presumes as a necessary condition the discreteness of the objects classified in relation to some characters, it since for any treatment of classification on the basis of rests the dissection into classes of some multiple of quite distinguishable and discretely related objects.

However discreteness is shown unevenly at different levels of organic life. This is owing to the fact that systems pertaining to different levels have certain profound fundamental differences involving their internal structures. In this aspect, which interests us in this case, it is important to emphasize differences in degree of organism discreteness as determination of type of biological systems and systems of phytocenotic level.

Organisms by nature are discrete, so discreteness of life at this level, is its quantization as regards limitations in space and time (i.e. mortality) as an individual has a particular meaning, since only quantumly was evolution of its life form possible (Timotheev-Resovskii, 1964). Therefore while there were instances, especially among plants, when it was not always easy to distinguish individuals, from vegetative clone growth, in essence organisms as individuals, as discrete systems (indivisible) are a cardinal property of the organic level of life. Possibility of existence as discrete systems is linked

"with structural type" of integration of parts (Lapunov, 1963) and with high integration of organism, is possible by continuous be exchange with the medium to supported by specialized organs of control in a state of homeostasis or homeorhesis, all its internal organization and to propagate it by hereditary elements to its offspring.

When we turn to the phytocenotic level we see that systems at this level are characterized by quite another type of integration. Here there are no structures founded on subordination and separation of function like structures of an organism, no hereditary apparatus, like the genome organization of an organism, absent are specialized organs taking functions of receptors and organs of control, no specialized organs propagating systems in the community. While in plant communities there are seen features of selfregulation, expressed in phenomena of homeostasis (self maintaining climax communities) and homeornesis (unitypic and equivalent course of succession) yet regulation in a particular case is static as result of stochastic (linked to fortuitous) behavior of particular components of the community (Aleksandrova, 1961), and regulation mechanisms thereby differ essen tially from action of specially controlled and regulated organs present in organisms. The phytocenose system is a system of static type integration according to A. Lapunov (1963); it is not a centralized system, while yet as an organism it is a system of centralizations (Bertalnffy, 1956, 1960). The plant community is distinguished by a low grade of integrity. K. M. Zavadskii (1961,1967) analyzing integration of systems by grade of integrity into series of classes, assigns to the more primitive type of integration systems featuring absence of centralized controlpatterns, with integration effected by direct interaction between the elements, with little interdependence of the elements, (retaining considerable freedom of parts). Thus, a more primitive type of integration marks the plant community.

The concept of "individual" is generally inapplicable to phytocenotic systems (Pachoskii, 1921; Alekhin, 1924b: 78; cf. here p. 157). I. K. Pachoskii wrote "A plant community is not an individual, for development of the latter is irreversible... An organism like any other indidula may be destroyed, may, all in it fragmented. die: it may in some properties approach its original level; but as a whole it an irreversible phenomenon, and where reversed, so only in very narrow limits ... Yet there are other considerations holding against recognition of plant communities as real indivisibles. The fact is that the latter gets its start, received from some other indivisible, and its finish is determined not by external but by internal effects. Animals and plants die often under the most favorable external conditions, if only because they became weakened, aged, and as a result of this the whole organism becomes inoperable. It is shifted to new indivisibles as given in the act of birth. By this life of a series of organisms flows intermittently, by jumps or surges. The plant community by contrast is continually renewed. Outlived elements are replaced by the new and the young but its integrity and continuity, as of particular units, are not disturbed. The community knows no death. It is renewed incessantly and remains eternally vital and young. Even more than that it is transformed passing with the flow of time into quite different community types, smoothly, not losing its continuity. Elements not compatible to changed conditions, constituting the vitality of the community itself are simply shifted to other elements most imperceptibly. Such continuity is a feature of complexes (in modern language, systems, V. Aleks.) made up of physical, non-interrelated units, which may shift and change.. In view of freedom of structures such complexes may almost uniformly readily develop progressively or regressively." (Pachoskii, 1921: 333-334).

With all these features there is associated a profound difference in degree of discreteness at the organismic and phytocenotic level: Just as discreteness is a cardinal property of biological systems, of the organismic level, in the same measure continuity is a cardinal feature of the phytocenotic level. On the subject of the continuity of the plant cover we shall dwell in more detail on account of its great importance for classification of phytocenotic objects.

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TULANE UNIVERSITY

NEW ORLEANS, LA. 70118

Department of Biology

11 January 1974

Dear Leon Kelso:

Did I thank you for recent communiques? They are so welcome. I was esp pleased to have the copy of Dr. Lawrence's letter which was his warm self that I knew when we were common roomers at the bed and breakfast lodge near Kew Garden station in 1954-55.

Work on the second edition of RMNats is proceeding with the inevitable checking that comes with such a roster, 1/3 larger than the 1950 book.

I join Lawrence in the hope that you will write your recollections of your Washington-Colorado years for posterity. It would be a precious record.

Best wishes for a good year!

Sincerely,

Joseph Ewan

lenngrad . February 6, 1971

Dear Dr. Kelso:

Allow me to express you my sincere thanks for sending me the excellent manual of the Rockies Carices and some interesting passages from the news-papers as well); the Book arrived in good condition I hope to have opportunity to find something inte of interest to send you, in my turn.

It present we are preparing for our English Club, the discussion on the following theme: "The Biosphere: yesterday, today, to morrow ...?" The meeting is to be hold to the close of February or so. My topics are: "The 'ultimatum' of Brosphere" and " On the significance of Some old sciences (such as botany.)" The problems of the preservation of nature will are also be under consideration by the way I've received from Prof. Takhtajan
some reprints of papers (or speeches, to be
ergant exact) by Prof. It's on athem
conservation and I was inspired a great deal. I think they are excellent exsamples of scientific elloquence, aren't they? Couldn't you & get for me some copies of other interesting papers dealing with the problem of conservation (+:9. by Spring yer yetis mentioned about?

Our winfer is about to be over, but well still have not the real winter but sooner something intermediate between a late autumn and an early spring. I'm afraid that the summer won't be like a real summer, too. But now we are wasting for the real spring. The Day's the conte much longer and Brighter I But I hope to have possibility for skring to teleruary yet.

Regards,

yours succeely B. Yurker

Dr L.Kelso

1601 Argonne P1. NW 351

Washington, D.C. 20009

U.S.A.

Dear Dr. Kelso,

Thank you very much for herbarium specimens which you kindly sent us as a gift.

The specimens have arrived in good condition.

Thank you once again.

With best wishes

Sincerely yours

J.T. Vassilczenko Prof. Dr.



АКАДЕМИЯ НАУК СОЮЗА СОВЕТСКИХ СОЦИАЛИСТИЧЕСКИХ РЕСПУБЛИК

БОТАНИЧЕСКИЙ ИНСТИТУТ

имени В. Л. КОМАРОВА

Ленинград, П-22, Ул. проф. Попова 2.

Телегр. адрес: «БИН»

Телефон В 2-10-90, В 2-15-65

На ваш № Содержание Ham No

Дата 15/17-69

Д-ру Л:Келсо Вешингтон, Д.С. 20009 С.Ш.А.

Уважаемый д-р Келсо,

Большое спасибо за присленные Вами гербарные образцы северо-американских растений. Материал прибыл в хорошем состоянии.

С наилучшими пожеланиями

Искренне Ваш

Ullei

И.Т.Васильуенко,Проф.,Д-р Заведующий Гербарием





71 IV 1966 Dear Dr. Xelso: I thank you very winch for your kindness in sending are the reprint and Vicinity I" at a grayment at type Isa

Ботанический институт Академии наук СССР $\Gamma \, E \, P \, B \, A \, P \, H \, \ddot{H}$

Ленинград, П-22, ул. проф. Попова, 2

THE HERBARIUM

Botanical Institute of the Academy of Sciences
of the USSR

Prof. Popov Str. 2, Leningrad, P-22

Dr L.Kelso
I60I Argonne Pl.N W
Apt. 30I
Washington , D.C. 20009
U.S.A.

February 28th, 196 6

Дорогой коллега,

Мы с благодарностью подтверждаем получение, в хорошем состоянии, нижеперечисленного гербарного материала.

Приложение: Наша расписка в получении.

С искренним уважением,

Заведующий Гербарием

Dear Colleague,

We acknowledge with thanks the receipt of the following herbarium material, which has arrived in good condition: Type material of POA MONTEVANSII for attention of Dr N;Tzvelev and Dr.B.Jurtzev.

Enclosure:

Yours sincerely,

Keeper of the Herbarium.

J.T. Vassilczenko, Prof.Dr

Тип. БИН. Зак. 37-1000. 6-X-64 г.

Дорогой доктор Келсо!

Большое спасибо за Ваше письмо от 3.09.1965 и оттиски статей. Тронут Вашей высокой оценкой моей книги "Экология птиц и зверей лесостепных дубрав". Однако вряд ли кто-нибудь станет переиздавать ее на английском языке.

Рад, что Вы получили капитальную книгу академика В.Н.Сукаче ва. Она представлят большой научный интерес. Сам академик Сукачев - поразительный ученый и человек. Я имел счастье работать под его руководством много лет тому назад, еще будучи студентом университета, а затем уже став научным сотрудником. К сожалению, Сукачев уже глубокий старик (в июне ему исполнилось 35 лет), но он полон энергии и творческих сил. Правительство отметило его заслуги перед страной почетным званием Героя социалистического труда с вручением Золотой Звезды и ордена Ленина.

С интересом прочитал строки Вашего письма, где говорится о параллелизме поведения ряда видов зверей и птиц фауны США и СССР Зоологи иделяли много внимания сравнению видового состава фауны Северной Америки и Евразии. К сожалению, экологическим аспектом проблемы почти никто не занимался. Но для этого надо хорошо знатв экологию и Ваших и наших животных, причем желательно не по книгам, а по личным наблюдениям в природе.

Рад, что Вам удалось совершить большое путешествие по стране. Моя полевая работа последние годы ограничивается Ленинградской областью. Однако ее фауна изучена настолько плохо, что каждая поездка приносит много интересного и полезного.

у меня к Вам две больших просьбы. Не могли ли бы Вы прислать бротору (или ее фотокопию): Patton David R. The influence of forest cutting on browse availability. M.s. diss. Virginia Polytech. Inst., 1963.

меня вообще очень интересурт работы, касающиеся экологии лесных птиц и зверей и их влияния на лесную растительность и фауну. Нельзя ли, во-вторых, достать книгу: Romanoff & L. The avian embayo. New York, Edit. Macmillan, 1960.

Может быть, Вас, в свою очередь, интересуют какие-нибудь книги по зоологии, вышедщие в СССР?

желаю всего наилучшего!

Ban t. Hotum

Ботанический институт Академии наук СССР ГЕРБАРИЙ

Ленинград, П-22, ул. проф. Попова, 2

THE HERBARIUM

Botanical institute of the Academy of Sciences
of the USSR

Prof. Popov Str. 2, Leningrad, P-22

Dr Leon Kelso

June 15-th 965

1601 Argonne Pl. NW . Apt. 351 Washington 9, D.C. U.S.A.

Дорогой коллега,

Мы с благодарностью подтверждаем получение, в хорошем состоянии, нижеперечисленного гербарного материала.

Приложение: Наша расписка в получении.

С искренним уважением,

Заведующий Гербарием.

Dear Colleague,

We acknowledge with thanks the receipt of the following herbarium material, which has arrived in good condition: 105 sheets (duplicates), a valuable addition to our colletions of vascular plants.

XXXXXXXXX

Yours sincerely

Keeper of the Herbarium.

J.T. Vassilczenko

Professor, Doctor

Tun. BRH. Bax. 37-1000, 6-X-64 r.

Вотанический институт Академии наук СССР ГЕРБАРИЙ Ленинград, П-22, ул. проф. Попова, 2

THE HERBARIUM Botanical Institute of the Academy of Sciences of the USSR Prof. Popov Str. 2, Leningrad, P-22

November 301 196 4

Mr. L.Kelso 1601 Argonne Pl.NW Apt. 351 Washington 9, D.C. U.S.A.

Дорогой коллега,

В продолжение обмена гербарным материалом между нашими учреждениями мы высылаем Вам 26 листов дублетных образцов. (24 вида)

Просим уведомить нас о получении материалов.

С искренним уважением,

Заведующий Гевоарием.

Dear Colleague,

In continuation of the exchange between our herbaria, we are sending you 26 sheets of duplicates. (24 species)

We should very much appreciate an acknowledgement of the receipt of this material.

Keeper of the Herbarium.

Professor, Doctor

Тип. БИН. Зан. 35-1000. 15-X-64 г.

UNITED STATES DEPARTMENT OF AGRICULTURE OFFICE OF THE SECRETARY WASHINGTON

OFFICE OF PERSONNEL

OCT 19 1959

Mr. Leon H. Kelso 1370 Taylor Street, N.W. Washington 11, D. C.

Dear Mr. Kelso:

This refers to your letter of October 9, 1959, with an attachment, in which you make reference to your previous employment in this Department and ask whether there are presently existing in any of the Department's personnel offices files regarding such employment.

We have checked the files of this office and also have had a check made of the files and records of the Agricultural Research Service, the successor agency to the former Bureau of Biological Survey. Please be advised that no records exist in either office pertaining to your employment. Inactive files are destroyed after 15 years; hence, if your employment in this Department terminated in 1937, the files would have been destroyed several years ago. Of course, your official personnel folder, which the attachment to your letter indicates you have seen, would contain a record of your employment here, but as you may be aware, such folders are not retained by an employing agency after an employee leaves its service.

The policy of this Department is to restrict the use of confidential information relating to employees or former employees to persons having a legitimate right to it.

Sincerely yours,

Director of Personnel

EMERSON STRINGHAM

Box 986

KERRVILLE, TEXAS

YOUR DATE

MY DATE

1959 April 20

Dear Mr Kelso

Thank you for second batch of publications. You are also a botanist -- and such botany. Carex. If vague recollection serves me correctly, there are as many species as of all PASSERIFORMES: Owls seem to be your favorites, in the animal kingdom.

Possibly you are in sympathy with Coues' opinion, that feathers maintain organic connection with bird's body. I have no detailed knowledge of recent literature on this point.

Inline Stirg Fam

DIVISION OF BOTANY AND PLANT PATHOLOGY



DEPARTMENT OF AGRICULTURE

Ottawa, Ontario.

October 29, 1954.

Mr. Leon Kelso, 1407 Stout Street, Denver, Colo., U.S.A.

Dear Mr. Kelso:

Your note of July 17 and the two interesting sedges with smutted perigynia were on my deak when I came back from a summer's field work in B.C., in late September. Unfortunately so were many other letters and specimens --hence the delay.

The smut on Carex affin. abdita is Cintractia carpophila var. carpophila, which is not commonly found on species of Montanae although we have had it on C. rossii.

The smut on <u>Carex disticha</u> is also referable to <u>Cint. carpophila</u> var. <u>carpophila</u> (a wide ranging smut), but seems to approach var. <u>verrucosa</u>, which attacks <u>Ovales</u> subsect. Festivae.

Mr. Calder has looked at the <u>Carex</u> affin. <u>abdita</u> and agrees that it seems best to file it under that species, although it seems to be fantastically out of its range.

Yours very truly,

DBD Sairly

D. B.O. Savile, Senior Mycologist.

DBOS: JMM

DIVISION OF



DEPARTMENT OF AGRICULTURE

Ottawa, Ontario. June 8, 1954.

Mr. Leon Kelso, 1407 Stout Street, Denver, Colo., U.S.A.

Dear Mr. Kelso:

Many thanks for the two rusts on <u>Carex</u>. There are only overwintered spores in these specimens, which makes positive identification difficult, but both specimens appear to be <u>Puccinia dioicae</u> Magn. These rusts are best collected in mid or late summer when there are usually abundant urediospores and teliospores in good condition.

Yours very truly,

D. B. O. Savile, Senior Mycologist.

DBOS:JI

NATIONAL SCIENCE FOUNDATION OFFICE OF THE DIRECTOR WASHINGTON 25, D. C.

May 13, 1954

Mr. Leon Kelso 1407 Stout Street Denver, Colorado

Dear Mr. Kelso:

It is not difficult to answer the questions asked in your letter.

The National Science Foundation does no editing or supervising of any kind of the research or publications resulting from its scientific research grants. It endeavors to maintain its support for research on such a basis of freedom for the investigator as he would enjoy under support from his own institution or private sources.

The Foundation is not undertaking to develop any sort of control over American scientists. It will have no "dossier" on anyone. The Act of Congress establishing it requires the Foundation in the national interest to maintain a national register which in time of emergency might be of great value to the government.

The Foundation does not "initiate" research projects. It may, through such appropriate methods as providing support for conferences in certain areas of science, be the instrumentality through which greater interest in such areas is stimulated. All projects for which grants are made are initiated by the scientists themselves.

The philosophy underlying the operation of the National Science Foundation is that the greatest progress in science will be made if competent scientists are in position without direction or control to pursue research in which they are interested.

Very truly yours,

Paul E. Klopotes Paul E. Klopsteg Associate Director

Oklahoma Agricultural and Mechanical College

School of Arts and Sciences and Agricultural Experiment Station

Botany and Plant Pathology

April 8, 1954

Stillwater, Oklahoma

Dr. Leon Kelso 1407 Stout Street Denver 2, Golorado

Dear Dr. Kelso:

Day before yesterday I received your package containing thirty-five sheets of Carex. I found them quite interesting.

I will have exchange material available some time next fall when I distribute this season's collections.

Sincerely yours,

U. T. Waterfall Assistant Professor and Curator of the Herbarium

UTW: bw

BOSAB SHRATSB BEARINGHTOR KROMME

AEROGRAM

GODKANT AV KUNGL GENERALPOST-STYRELSEN (III 1683,49,1) BEFORDRAS FÜR 30 DRE MED RLYG ÜVER HELA VÄRLDEN

> LUFTPOST PAR AVION

Dr. L. Kelso 1407 Stout St. Denver, Colo.

U.S.A.

SENDER EXPÉDITEUR ABSENDER

BOTANIC GARDEN

OBST BEFORDRAS ICKE SOM AFROGRAM, OM NÅGOT LÄGGES INUTI

Ljungdohls, Nybi

BOTANIC GARDEN GOTHENBURG & SWEDEN

Dr. L. Kelso 1407 Stout St. Denver, Colo. U.S.A.

Gothenburg, 6.4 1954

Dear Dr. Kelso,

I have to acknowledge with very many thanks two reprints about Carex, of which I have much interest. This is very valuable addition to the library of my institution, and I am most grateful.

Yours very truly

/ Bertil Lindquist/ Professor of Botany and Director of

BOTANIC GARDEN
GOTHENBURG &

Oklahoma Agricultural and Mechanical College

School of Arts and Sciences and Agricultural Experiment Station March 6, 1954

Botany and Plant Pathology

Stillwater, Oklahoma

Br. Leon Kelso 1h07 Stout Street Denver, Colorado

Thank you very much for your two reprints on Carex from the Biological leaflets Nos. 64 and 66. I would be happy to exchange Carex with you, if you are interested in doing so.

Sincerely yours,
U.T. Waterfall

U. T. Waterfall

Asst. Professor and Curator of the Herbarium

UTW:fds

Dear Mr. Kelso:

I am glad for your sake, you go ord of this territe place. Conditions are no title and vise will to. I ley insisted on sendis you comilling - This Considerie asked me to po the with, never asked me to do anything of the kind topice. I was Paul to do it you you tut did know & any this re cover sens your, that would Le of any use to how. The 20.00 long and Honght a chick the Fest, I hope you received and so not suit I mailed it yesterday.

Hunt Institute for Botanical Documentation

BAILEY HORTORIUM NEW YORK STATE COLLEGE OF AGRICULTURE CORNELL UNIVERSITY ITHACA, NEW YORK

G. H. M. LAWRENCE, Director H. E. Moore, Jr. ETHEL ZOE BAILEY

12 November 1952

Address:
BAILEY HORTORIUM
SAGE PLACE, ITHACA, N. Y.

Mr. Leon Kelso 1370 Taylor St., N.W. Washington 11, D. C.

My dear Leon:

Please accept our sincere thanks for your generous response to my request for the package of your papers received last week. We are very glad to have them and to include them in our library. I am enclosing the Hortorium's check for \$5.00 to defray some of the expense incurred by you in their preparation.

Thank you for your kind words with regard to my recent taxonomy book. The book is not without its faults and contains far too many misprints and typographical errors. Fortunately, the latter will be corrected in a second printing of the book. I must confess that I am not at all clear as to what your present duties cover. I did know at one time that you were working in the Wildlife Service. I do not know if you are there now or not. I do not know anyone connected with that organization in Washington, hence I am out of touch, not only with the personnel but with its work. If you feel inclined to write me, I would be glad to hear more of your activities. I get into Washington occasionally, but usually it is to the National Herbarium and to the U. S. D. A. Library.

Again, many thanks for your prompt response in sending me your papers. With every good wish to you,

Cordially yours,

lm

BAILEY HORTORIUM NEW YORK STATE COLLEGE OF AGRICULTURE CORNELL UNIVERSITY ITHACA. NEW YORK

G. H. M. LAWRENCE, Director H. E. MOORE, JR. ETHEL ZOE BAILEY

23 October 1952

Address:
Bailey Hortorium
Sage Place, Ithaca, N. Y.

Mr. Leon Kelso 1370 Taylor St., N. W. Washington 11, D. C.

Dear Leon:

It has been many years since we occupied adjoining seats in Professor Wright's classes under the eaves of McGraw Hall. Hence it was a pleasant surprise to me to see last week, at the Gray Herbarium, a copy of your Biological Leaflet no. 61.

I have read your earlier papers in Rhodora and American Midland Naturalist with interest, but for some reason had not known until now of your leaflets. We have a good library of taxonomic literature here at the Bailey Hortorium, but your leaflets are not in it. Hence I write to inquire if it is possible to obtain those dealing with botanical subjects and at what price. We should have these and I hope to learn of their availability.

Sincerely yours,

C H M Lawrence

lm



REED C. ROLLINS, DIRECTOR ROBERT C. FOSTER, ACTING GURATOR FRANCIS WELLES HUNNEWELL, RESEARCH ASSOCIATE EDITH SCAMMAN, RESEARCH ASSOCIATE



barvard University

NICHOLAS POLUNIN, RESEARCH FELLOW
MARJORIE W. STONE, LIEBARIAN AND SISLIOGRAPHER
JANE HERSEY, ASSISTANT SISLIOGRAPHER

79 GARDEN STREET
CAMBRIDGE 38, MASSACHUSETTS, U.S.A.

May 13, 1952.

Mr. Leon Kelso, 1370 Taylor Street, N.W., Washington 11, D. C.

Dear Mr. Kelso:

like you, I am a product of the Rocky Mountain region, having grown up in Wyoming. I wish I knew exactly what you are hitting at in your letter of April 26th, for I am not conscious of the subservience of western institutions nor of excess of "argument, bullying and cannibalism! Having spent eight years at Stanford University and with many associations at the University of California, I do not believe, at least in those two instances, that their cue is taken from the eastern seaboard. It may have been in the past that the eastern botanical centers excercised an undue influence on the botany of the country but I do not think the situation is properly stated by saying that that is true today.

I am personally very anxious to see Taxonomy prosper no matter where and wherever the opportunity arises I shall certainly push this aspect of botanical science. I am sorry that the new head of the Smithsonian Institution is not a taxonomist but that may not mean the demise of the subject there. At least, we can hope not.

Sincerely yours,

Reed C. Rollins

RCR:c

Reed C. Rollins



OFFICE OF PROVINCIAL MUSEUM

April 9, 1951.

Dr. Leon Kelso, 1370 Teylor St., NW., Weshington 11, D. C.

Dear Dr. Kelso:

Thenk you very much indeed for your letter of Merch 24 and the return of the Castilleja plus additional specimens from Coloredo and elsewhere. These all arrived in fine condition.

I am greatly interested in your findings, it is surprising what a lot of puzzles turn up in this genus, the species do not seem to have become very well segregated, possibly because the intermediate links are still extent, how fortunate they are extinct in other groups of plants when differentiation is less complex!!

The extension of renge of <u>C. chrymactis</u> is nerelleled by <u>C. Henryae</u> which you named for me from Manning Perk, near Princeton near the southern border of B. C. It was originally described from the Pesce River district, much further to the north.

When one considers that the southeastern area of B. C. was once the fringe of an ice cap, the mossibility of its identity with an Alaskan species is not so surprising after all.

Thank you also, for the correction in the Carex, I am very pleased that you discovered this discreancy.

With best wishes and kindest regards and appreciation of your kindness.

Sincerely yours,

George A. Berdy
Baterist

CAH: SB

COLORADO AGRICULTURAL AND MECHANICAL COLLEGE FORT COLLINS, COLORADO

March 20, 1951

Mr.Leon Kelso 1370 Taylor St., N.W. Washington, D.C.

Dear Mr. Kelso:

Recently an envelope addressed merely to the "Dept. of Botany" arrived here containing records of correspondence mostly between you and Mr.Smith. Since Mr. Smithis no longer at this institution and since one of the letters appears to be one I wrote to you on Nov. 26, 1943, the contents were turned over to me.

Your comments and observations written in long-hand appear to be partly addressed to Mr.Smith and partly to someone else. I trust I did not take a liberty in reading them. May I enquire what disposition you wish made of them? Mr. Smith is now living with his grand-daughter in Texas and I will be glad to enclose your material to him. Or do you wish it to be handed to the head of the department here?

Very truly yours

H. D. Harrington

Associate Professor and Curator of the Herbarium.

M. WALTER PESMAN Landscape Architect and Land Planner

372 So. Humboldt Denver 9, Colo.

Telephone PE. 4166

Man 3 - 50

Dear Mr. Kelso Even though your interesting Biological Leaflets reached me in a sout of heavy more just now, I want to tak, a minute to express my appreciation. I must corfer complete ignorance in this field of Bird feathers and radio activity, but I can't help but ful that you may be hitting upon some-thing that is, - at least - highly interesting, and at most may had into important finding! More power to you! Cordially M. Walter Perman

Hunt Institute for Botanical Documentation



DEPARTMENT OF AGRICULTURE

Central Experimental Farm. Ottawa. Ontario. January 6, 1950.

Dr. Leon Kelso. 1370 Taylor St. N.W., Washington, D.C., U.S.A.

Dear Dr. Kelso:

A few days ago I came across your paper on Carex uncampahere and was wondering if you still had any duplicates of this species for distribution. If so a sheet would be greatly appreciated.

During the past two years we have had a number of field parties in the Arctic and Sub-Arctic regions of Canada, and at the present time have a considerable amount of material for exchange. If you would be interested in receiving a lot of approximately 50 sheets we will send one along when we make our annual distribution this coming April. We would include in the above lot a fairly extensive series of both Carex and Salix in which I believe you are interested.

As regards our own herbarium we would be most interested in receiving exchange material (cultivated, native, or introduced) from any part of the United States. At, the present time, however, any duplicate material of Carex would be especially appreciated.

Yours very truly,

Botanist.

9.5. Would greatly affected

otanical Documentation

CALIFORNIA ACADEMY OF SCIENCES GOLDEN GATE PARK SAN FRANCISCO 18, CALIFORNIA

apr. 2, 1948.

Dear Mr. Kelao:

Thanks so much for the expy of heaft. No. 38. I am very good to have it in my file of caux literature.

Court we make be gratiful to you for a opening of Court weempolique (and any other carrier, expended charter, that you may wish to send). In return I also how 1947 deplicate of my Sino crelections if you would have.

Separates I am miling you of specimes of cause aparts. I have they hap you with your study.

Hunt Institute for Botanical Documentation

THE SCIENCE MUSEUM

CALIFORNIA ACADEMY OF SCIENCES GOLDEN GATE PARK SAN FRANCISCO 18, CALIFORNIA

THE STEINHART AQUARIUM

mm. 17, 1948

Dear Mr. Kelso:

I have just seen a reference to a new species of Caux which you herewhole from Colorado - C. mempahare do you may remember, I am intended especially in western american members of the gener and I try to get specimes and literature for all. If you will send me a copy of Book. hope. no. 38 for my few I shall be glad to pay your for it. also if you have a displicate of your new opens (or a fragment of it wen) we shall value it highly. Maybe we can send whit you want in return.

We are towing an unprecedented dry winter in

Hunt Institute for Botanical Documentation

Colymia and the serious affects of the drought are being felt in many ways. Right now we are having our first series of storms since before Christmas. Here's hoping thang continue. With kindest regards, I'm, 1 cry smarely yours John Thomas Howell

Hunt Institute for Botanical Documentation

is the first of the large are all for my fire I had grape in

Gray Berbarium

M. L. FERNALD, Director Fisher Prof. Nat. Hist. (Bot.) CHARLES A. WEATHERBY, Research Associate FRANCIS WELLES HUNNEWELL, Research Associate LYMAN B. SMITH, Curator



barvard University

RUTH D. SANDERSON, Librarian
MARJORIE W. STONE, Bibliographer
ROBERT G. FOSTER, Assistant
BERNICE G. SCHUBERT, Technical Assistant

79 GARDEN STREET, CAMBRIDGE 38, MASSACHUSETTS, U.S.A.

January 14, 1947

Mr. Leon Kelso 1370 Taylor Street, NW. Washington, D.C.

Dear Mr. Kelso:

Now that the science meetings are over, I have been able to get back to indexing the willows. I just wanted to stop and tell you how much the notes you sent me have helped. The cards will go into the April issue and it is good to feel that the basonyms are right and not mere guesses on my part.

Sincerely yours,

trangois 6. Stone

Marjorie W. Stone Bibliographer

MWS/MH



OFFICE OF PROVINCIAL MUSEUM VICTORIA

February 12, 1946.

Dr. Leon Kelso, 1370 Taylor St., Washington, D. C.

Dear Dr. Kelso:

I am in receipt of your letter of January 31, and the parcel of plants which arrived in good condition.

Thank you very much for the identifications which you attended to so promptly and efficiently. Your help in straightening out this difficult group of plants is greatly appreciated.

I had no idea there were so many species represented in the collection. C. Henryae is especially interesting. I do not have access to the reference you give for the original description so could you let me know the name of the locality from which they came?

I am pleased to have the specimens of Carex and Sphenopholia which you kindly included in the return parcel. Is Piney Branch Woods in Washington State? I have not yet checked up to see if these species occur also in British Columbia.

I can imagine that you must have had a very enjoyable trip to Colorado. There is always a thrill in exploring in the alpine regions.

With best wishes,

Yours sincerely,

George A. Hardy,

Botanist.

George a Hard



OFFICE OF PROVINCIAL MUSEUM

January 14, 1946.

Dr. Leon Kelso, 1370 Taylor St. N.W., Washington, D. C.

Dear Dr. Kelso:

I am taking the liberty of sending you a small parcel containing a number of Castilleja species which I hope are in a sufficiently good state of preservation for identification.

They were collected at Manning Park between Hope and Princeton, B.C., Latitude 121°, Longitude 49° and 50°, during the summer of 1945. Many of them are rather far advanced and may not be easy to examine, so I hope you will not put yourself to any undue trouble in such cases.

Where there are sufficient duplicates you are welcome to an example, if they would be acceptable.

I hope eventually to include your findings in a report on the flora of Manning Park. The majority of the collecting stations were between 4000 feet and 7000 feet, which I have indicated on the labels. Manning Park is of special interest biologically for it is the meeting place of the western wet zone and the eastern dry one, combined with fairly high altitude.

With best wishes,

Yours sincerely,

George A. Hardy, Botanist.

GAH/MC

SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

WASHINGTON, D. C.

July 27, 1945.

Mr. Leon Kelso 1370 Taylor St. N. W. Washington 11. D. C.

Dear Mr. Kelso:

Thank you very much for the portion of your type specimen of Poa montevansii enclosed in your letter of the 26th, just received. I have placed it in our segregated type collection.

Sincerely yours.
Agnes Chase

Agnes Chase

Custodian of Grasses

Hunt Institute for Botanical Documentation

SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

WASHINGTON, D. C.

July 16, 1945.

Mr. Leon Kelso 1370 Taylor St. N. W. Washington, D. C.

Dear Mr. Kelso:

Dr. Maxon has handed me your Biological Leaflet No. 29, with the description of Poa montevansii, for the Grass Herbarium. Thank you very much for the publication and for the florets from the type, which I am placing in the segregated type collection. We should be very grateful if you could spare a bit more, a culm with panicle if possible. I suppose your specimen consists of tuffs.

Did you send an abstract to Biological Abstrats? If not I shall prepare one. I try to see that no publication on grasses is omitted.

Yours sincerely,

Agnes Chase

Custodian of Grasses

Agnes Chase



Gray Berbarium

M. L. FERNALD, Director
Fisher Prof. Nat. Hist. (Bot.)
CHARLES A. WEATHERBY, Research Associate
FRANCIS WELLES HUNNEWELL, Research Associate
LYMAN B. SMITH, Curator



barvard University

RUTH D. SANDERSON, Librarian MARJORIE W. STONE, Bibliographer ROBERT C. FOSTER, Assistant BERNICE G. SCHUBERT, Technical Assistant

79 GARDEN STREET, CAMBRIDGE 38, MASSACHUSETTS, U.S.A. March 26, 1945.

Dr. Leon Kelso, 1370 Taylor St. NW., Washington, D. C.

Dear Dr. Kelso:

material of plants described some time ago in Rhodora. We greatly appreciate your kindness in sending these specimens, although we have no hard and fast rule, as prevailed in Hitchcock's Manual, that he would map nothing from any state from which the specimen was not in the herbarium at Washington, although it might have been the type-specimen!

With kind regards,

Sincerely yours, M. L. Fennall

Director.

MLF/FMG

Gray Berbarium

M. L. FERNALD, Director Fisher Prof. Nat. Hist. (Bot.) CHARLES A. WEATHERBY, Research Associate FRANCIS WELLES HUNNEWELL, Research Associate LYMAN B. SMITH, Curator



Barvard University

RUTH D. SANDERSON, Librarian MARJORIE W. STONE, Bibliographer ROBERT C. FOSTER, Assistant BERNICE G. SCHUBERT, Technical Assistant

79IGARDEN STREET, CAMBRIDGE 38, MASSACHUSETTS, U.S.A. Dec. 4, 1944.

Mr. Leon Kelso, Taylor NW., Washington, D. C.

Dear Mr. Kelso:

It is very remiss of me not to have thanked you much sooner for the very pleasant greeting from you and your family on my last birthday. It is so unusual for any one to take any note of it that your remembrance was particularly appreciated.

Kindly give my best regards to Mrs. Kelso and the children.

Very sincerely yours,

M. L. Fornack

MLF/FMG



OFFICE OF PROVINCIAL MUSEUM

September 20, 1944.

Dr. Leon H. Kelso, 1370 Taylor St. N.W., Washington, D. C., U. S. A.

Dear Dr. Kelso:

Through the kind offices of Mr. Allan Brooks I have recently received a copy of your article entitled "The Creeping Willows of the Central Rocky Mountains". I am so impressed with this contribution to western botanical literature that I am writing to ask if you have any other publications on the subject and if you will place the Provincial Museum on your future mailing list.

If at any time you should wish to examine material in our herbarium I shall be happy to cooperate with you.

We have a herbarium of British Columbia plants amounting to some 17,000 sheets at the present date.

Hoping to hear from you,

Yours sincerely,

George A. Hardy, Botanist.

George a. Hardy

GAH/MC



DEPARTMENT OF AGRICULTURE

Central Experimental Farm,

Ottawa, May 30, 1944.

Leon Kelso, Esq., 1370 Taylor St, N.W., Washington, D. C.

Dear Dr. Kelso:

Your first reply reached me just before leaving Halifax and now yours of May 24th has been forwarded to me here where I will be engaged for the summer.

I am indeed glad to have your comments on the Glyceria specimens. I am making the notations on the sheets of my original set of collections which is deposited in the herbarium of this Division. I am also revising a sheet of G. grandis collected by Dr. J. H. Soper (No. 2431) on August 21, 1940, along the "shore of the marsh between Hamilton and Dundas, Ontario" (western tip of Lake Ontario), to G. maxima (Hartm.) Holmb. This number will also be represented in the Gray Herbarium, and I think I shall write there to see whether the workers there will agree on the revision. As far as I know, this and the ones collected in 1943 are the only records of the plant from Canada.

Now, I imagine the package of plants forwarded on May 12, are being held at Dalhousie for my return. Looking over the list, these appear mighty interesting and the large majority are not represented in the small herbarium at Dalhousie. The sedges and rushes are the next group which I wish to tackle for Nova Scotia and quite a lot of material has already been gathered for that purpose. The sheets of Carex that you have included will be very helpful in identification.

Thanking you for your several kindnesses, I remain,

Sincerely yours,

Millian G. Dore

WGD:pc

FORT HAYS KANSAS STATE COLLEGE HAYS, KANSAS April 3, 1944

Mr. Leon Kelso 1317 Taylor N. W. Washington, D. C.

Dear Mr. Kelso:

A few days ago I received your leaflet giving the plants of Denver and vicinity. I note you refer to the "closed shop policy" mentioned in leaflet No. 19 and also Endoora. Since I have neither of these publications perhaps I do not see the whole picture. Here at Hays we are very much interested in texonomy. Perhaps not so much for the sake of texonomy, but working tool. Frenkly, I am vitally interested in this subject.

We feel we are giving fairly thorough work along this line and hope the time will come when we can do more work in this field, perhaps to the extent of writing a manual that includes the plants of this vicinity. We have a small herbarium of about 50,000 specimens and use it much as one would use a dictionary.

I shall be glad to know more of your reaction in respect to this subject.

Sincerely yours

Professor, Department of Botany

rvc

Gray Herbarium

M. L. FERNALD, Director Fisher Prof. Nat. Hist. (Bot.) CHARLES A. WEATHERBY, Research Associate FRANCIS WELLES HUNNEWELL, Research Associate LYMAN B. SMITH. Cursten



Barvard University

RUTH D. SANDERSON, Librarian MARJORIE W. STONE, Bibliographer ROBERT C. FOSTER, Technical Assistant BERNICE G. SCHUBERT, Technical Assistant

79 GARDEN STREET, CAMBRIDGE 38, MASSACHUSETTS, U.S.A.

March 7, 1944

Dr. Leon Kelso 1370 Taylor N. W. Washington D. C.

Dear Dr. Kelso:

It was with great pleasure that we received your "Plants of Denver and Vicinity" and "First Supplement" this morning. The first of January I wrote to you in regard to Biological Leaflet no. 19 and the letter was returned. I could not find a recent address and used one which we had had in our letter file for some time.

We had found your paper listed in the botanical literature reviewing organs and naturally wished to have a copy in the library. Thank you you very much for sending it and the First Supplement. If we can send you one of our publications in exchange, please let me know. Perhaps you are familiar with our Contributions, many of which are reprinted from Rhodora.

Sincerely yours,

Ruth D. Sanderson

Librarian

CAULE ADDRESS - MUSEUM, CHICAGO

CHICAGO NATURAL HISTORY MUSEUM

[FORMERLY FIELD MUSEUM OF NATURAL HISTORY]

ROOSEVELT ROAD AND FIELD DRIVE

CHICAGO 5, ILLINOIS

December 10, 1943

Mr. Leon Kelso 1370 Taylor Street NW Washington, D. C.

Dear Mr. Kelso:

I thank you for your Biological Leaflets nos. 19 and 20. Your note in regard to the future of taxonomy is all too true. Apparently the change will be more evident in a very short time when the few remaining members of an older generation will be gone. Probably what we have to fear is not the extinction of taxonomists but the disappearance of good ones. It takes from 10 to 15 years to make good taxonomists, and under present conditions there are not many in the making.

There is perhaps some hope in the growth of the subject of ecology in the universities. This can not go far without a sound taxonomic bases.

The idea promoted in many of the universities that taxonomy is less important than experimental and laboratory studies has alweays seem to me a false one. The universities do not attempt such studies for the practical reason that they can't. The subjects have grown far beyond their power and they are obliged to do the things which they can do whether they are more important or not.

Yours very sincerely,

Wilfred H. Osgood Curator of Zoology Emeritus

WHO: pms

ADDRESS ALL CORRESPONDENCE, PUBLICATIONS AND PACKAGES TO

Gray Berbarium

M. L. FERNALO, Director
Fisher Prof. Nat. Hist. (Bot.)
CHARLES A. WEATHERSY, Research Associate
FRANCIS WELLES HUNNEWELL, Research Associate
LYMAN B. SMITH, Junior Curator
ERNST C. ABER, Research Associate



Barvard University

RUTH D. SANDERSON, Librarian MARJORIE W. STONE, Bibliographer ROBERT C. FOSTER, Technical Assistant BERNICE G. SCHUBERT, Technical Assistant JAMES H. SOPER, Teaching Fellow in charge of Laborators

CAMBRIDGE, MASSACHUSETTS, U.S.A.
Nov. 19, 1942.

Mr. Leon Kelso, 1370 Taylor Street NW., Washington, D. C.

Dear Mr. Kelso:

Thank you very much for the reprint on the food habits of prairie dogs, which is very interesting, and if we could only feel that prairie dogs made a proper selection for human beings, as rabbits are inclined to do, we might begin to eat some of these plants.

I especially appreciate the copies of the correspondence which, as you say, show how some young men get frozen out of systematic botany. The attitude is not a new one, and I wrote some months ago some paragraphs which will soon be published from which I have extracted a small portion which may give you comfort. It is indeed most unfortunate that scholarship under the direction of the Federal Government should be so subject to dictatorship! I am hoping that my squib, which is written by an elderly man not liable to persecution, may do some good.

M. L. Formack

MLF/FMG Inclosure

May 25, 1942 Mr Leon Kelso 1370 Taylor St n.W. Washington D.C. Dear Mr Kelso: Many Thanks for the leafleto which you sent me. The Oologist is doubly. interesting as I have studied botan in both the northeastern and northwestern portions of The U.S. I have collected and identified many of the plants you mention. I am sending gon a copy of my publication which you may find useful as a reference in case you wish impormation on lyoning birds. Emerely Otto M. Creary agricultural Half University of Myo Larame Wyo.

Hunt Institute for Botanical Documentation

birds so if at any future you time you should want all possible information on some Wyoning bird, I shall be glad to co-operate. Sincerely Otto mc Creary agricultural Kall Minersity & Wyoning faranie Wy oning,

DALHOUSIE UNIVERSITY HALIFAX, N. S. DEPARTMENT OF BIOLOGY

BOTANICAL LABORATORIES

February 20, 1942.

Dr. Leon Kelso, U.S. Biological Survey, Washington, D.C.

Dear Dr. Kelso :

I know you have published some critical papers on Glycoria in the last few years. Are you still interested in this group and would you like to examine some numbers for me? The material has been collected in Nova Scotia and presents some puzzling forms to me. Most of the material is in duplicate and you could keep it but a few sheets I would like to have returned here.

I would be pleased to hear from you before I send the specimens down.

Very truly yours,

W.G.Bore.

WGD/a

Grav Herbarium



barvard University

S. L. ROBINSON, Coretor
Ass. Gray Prof. Syrt. Bet.
M. L. FERNAL, Net. Hist. (Bot.)
CHARLES A. WEATHERSY, Assistant Coretor
LYMAN B. SMITH, Assistant
WILLIAM B. OREW, Assistant
RUTH D. SANDERSON, Liberium
MARADORIE W. STONE, Bibliography

CAMBRIDGE, MASSACHUSETTS, U.S.A.
NOV. 8, 1954.

Mr. Leon Kelso,
U. S. Biological Survey,
Washington, D. C.

Dear Mr. Kelso:

The two short articles sent for publication in Rhodora have come. They are both satisfactory material and can be utilized in the next volume. There is so much matter in type already waiting publication that it may be some months before they can be actually published.

Sincerely yours,

M. L. Formed

MLF/FMG

paper. Once again could lites the dust,

Grav Herbarium



barvard University

B. L. ROBINSON, Curetor
Ass Gray Prof. Syst. Bot.
M. L. FERNALD,
Figher Pad. Nat. Hist. (Bot.)
CHARLES A. WEATHERSY. Assistant Curator
LYMAN B. SMITH, Assistant
WILLAM B. D. ROEW, Assistant
RUTH D. SANDERSON, Liberian
MARJORIE W. STONE, Bibliographs

CAMBRIDGE, MASSACHUSETTS, U.S.A.

Jan. 2, 1934.

Mrs. E. H. Kelso, 2119 H Street NW, Washington, D. C.

Dear Mrs. Kelso:

This is just a word to acknowledge the receipt of the manuscript on Rocky Mountain Willows.

I will refer it to the editorial board of Rhodora later when they get together, but I think a place can be found for it some time later in the year.

Sincerely yours,

M. G. Fernald

MLF/FMG

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF PLANT INDUSTRY

DIVISION OF BOTANY

October 26, 1933.

Mr. L. Kelso,
Biological Survey,
Department of Agriculture.

Dear Mr. Kelso:

The revised manuscript of your article "A new form of Glyceria grandis and a key to its allied species" has been referred to me through the Office of Publications. I have a few minor suggestions to offer. I note that in the key you have var. Komarovii, while your description calls it a form. I suppose this is only an oversight. The English description of the form begins with a statement, "spikelets with more florets". One reading it would naturally ask, More than what? I think the English description should be complete in itself, consequently it would be well to repeat the measurements. You could then follow it with some such statement as the following: Similar to the species and intergrading with it [to avoid the sentence form], but differing in having spikelets with more florets, etc.

The name of the new form is Komarovii but it is not clear what Komarov has to do with it.

I think the article would be more helpful to botanists if the range of each species and variety were given but this would require a remodeling of the paper.

Sincerely yours, Hitche

A. S. Hitchcock, Principal Botanist in Charge of Systematic Agrostology.

O fice address: Smithsonian Institution.

Department of Botany, University of Denver, Denver, Colorado, October 25, 1933.

Mr. Leon Kelso, Biological Survey, Washington, D. C.

Dear Mr. Kelso:

I am enclosing some specimens of a fern which I find growing in the mountains near Denver and which are causing me a great deal of trouble in identification. Would it be possible for you to get the "ferm man" to help you to determine the species?

Apparently this particular species is not listed in any of the manuals for this region. I have tried keys for the identification of ferns in general, but have had just as little success. Perhaps the National Herbarium has access to still other books which we here do not have and would be willing to help me out. I would appreciate it greatly, and thank you sincerely, Leon, for anything you could do to help shed light upon it.

How is your work this year? I hope you like it as well or better than ever. D. U. has a nice increase in enrollment this year, and we seem to have an unusually bright Freshmen class.

Give my regards to Mrs. Kelso.

Sincerely,

Henritta Zobel

Henrietta L. Zobel Asst. Prof. Botany

Amherst, Mass. September 26,1933

Mr. Leon Kelso Division of Food Habits Research Bureau of Biological Survey Washington, D.C.

Dear Leon:

This letter has a double purpose, first to thank you for the material prepared for me on the ruffed grouse and second to give you particular hell for a number of things. The last letter I received from you is now classed as an antique, the paper has begun to yellow with age. Of course I know now that you have something of an excuse but he had to make a trip all the way up here to tell me. How can a fellow expect any congratulations if you never let him know about the goings on. However you can tell your better half for me that she is in for a peck of trouble for anyone that marries to a fellow in our line of work is in for not a few trials and tribulations. Just the same here's wishing you all the good luck in the world.

Things up in this part of the world have been in a terrible state of flux since early last spring, first one thing and then another. At the present they seem to be froming out a little and I hope that everything will be on an even keel about the first of November. My principal difficulty from then on is going to be getting enough money to do the work on. My appropriation this year was only a little more than \$500. for expenses of the office and travel so you can see that there will not be much chance of my coming in to Washington this winter. Since I have been so short of funds I have had more demands and unexpected drains on the finances than I have had in the three seasons I have been here, so that I needed more money to work with than ever before and I have less than half as much. I fully expect to be entirely out of funds by Christmas time and after that unless I find a Santa somewhere in the appropriations committee I am going to have to sit at home for a long stretch. Such things do not have such a direct bearing on you chaps in the Washington office. Mc has to take the blunt there, but here in the field it often means the abandonment of work under way after it has been carried on for a number of years or the missing of opportunities that may not present themselves again. All of which does not help the record of your individual project and makes the job just a little more unsecure.

I certainly did not intend to write more than I could get on the one page but since I had to start this one I may as well try to think of something to mar up this sheet as much as possible.

Since you are in double harness you might be interested in living conditions as we find them here. For a fellow on government pay they are getting worse all the time. Food stuff is at least 20% higher than it was a year ago, rents are just the same as they were when we arrived three years ago and clothing and household equipment have shown some increase in price. There does not seem to be much relief to the unemployed contrary to all newspaper and radio propaganda. In fact they are having considerable trouble with strikes in the industries that have been operating because of low wares and unsatisfactory working conditions. I am afraid that it is going to be a terriblly tough winter for lots of folk in this part of the country. I know that it sounds pessimistic but there seems to be little else in the air at present all of which does not help to improve conditions. Like all New England they are waiting to let someone else do the job first.

I just received a message to go to Springfield Mass. towerrow and set in on a conference. Gosh how I hate those conferences. Bot air, fellow if you could just get it confined someplace you could heat the whole U.S.A. on the gas. All talk and there is never a thing accomplished that could not have been done by one or two fellows given the proper authority and told to go to it. But, no, there are always a lot of muggs that have to have their cut of pie and as the result nothing ever gets done on time if ever.

By the way I have not received the list of seeds, buds and twigs that you said you would like to have f om this region. If you don't send the list how the duce do you expect to get them. Stop mooning around and send it up and I will do my best to get the order filled some time or other.

This page is pretty well filled up now so I think that this is a good a place to quit as any.

So Long.

Miller

The American Midland Naturalist
J. A. NIBUWLAND, C. S. G., Ph. D., Sc. D.
EDITOR
UNIVERSITY OF NOTRE DAME

NOTRE DAME, INDIANA. February 23, 1932

Mr. Leon Kelso 1807 G.N.W. Washington, D.C.

Dear Mr. Kelso:

I am including the Latin Diagnoses and citations of the specimens in the Herbarium Creene, asking you to include those according to your arrangement. I shall be glad to have the paper returned as soon as convenient, for we may be able to include it in the March issue.

There will be fifty free copies sent to you. If you should care to receive more, I should be glad to have your order.

Yours sincerely,

Theodor Just, Assistant Editor

ThJ/d

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA BERKELEY, CALIFORNIA

ROBERT O. SPROUL
PRESIDENT OF THE UNIVERSITY

ROBERT M. UNDERHILL
SECRETARY OF THE RECENTS

September 16, 1931

Mr. Leon Kelso United States Department of Agriculture Washington, D.C.

Dear Mr. Kelso:

At the meeting of The Regents of the University of California held on September 15, 1931, President Sproul reported your gift to the Herbarium of one hundred and eleven specimens of plants from California and elsewhere.

The Regents instructed me to express to you their appreciation of your generosity. The University is most grateful to you.

Yours very truly,

BM

UNITED STATES DEPARTMENT OF AGRICULTURE

BUREAU OF BIOLOGICAL SURVEY

ADDRESS REPLY TO CHIEF, BUREAU OF BIOLOGICAL SURVEY AND REFER TO washington, b. c.
in cooperation with
NORTHEASTERN FOREST EXPERIMENT STATION.

FH-Z

MARCH 11, 1931.

Dear Kelso:

I am sending out under separate cover the extra bulletins I have on hand. However I labeled Vol 5. No.3 to go to Cottam since it was the only copy that he requested and took one other and substituted for you. The reprint is still in print and I may be able to pick up the same for you at a reasonable rate one of these days. Knowing how generous the fellows are with their books and publications I am sure that you will be able to get any of them to read at any time and so the distribution of them is just a matter of giving each something to write his name on. It was necessary to send these in two separate bundles to avoid paying postage but I think that they will arrive in good shape in that way.

Thanks for that address and I am writing this evening for copies of their publications.

Sure I know that you get a half day holiday but do not get high hat we get the same when we get time to growd it in. At the present we get time to, since the road are in such condition that to travel on most of them is perilous to say the least. I was stuck in the snow the last three trips to the field and spent most of the time getting out so you see that we are still having our winter although most of the natives call it spring. They get that idea from the fact that the sap has started to flow in the maple trees, and the wind will blow your brains out every time you stick beak over the hill.

By the way did the new chap arrive that Mc. spoke of coming on the first of the month?

Tell the gang Hell-o and give them my regards

9 Fand Miller

J. Paul Miller P.O.Box 575 Amherst, Mass. UNIVERSITY OF CALIFORNIA
DEPARTMENT OF BOTANY
BERKELEY

Dear Mr. Kelso. -

of you have no objection, your manuscript will be frinted in the next number of the balefornia Botanical Society.

ivergular intervals - whenever it is possible to get time for it. There will not the another number in some time; so it seems but to return you clusts, with best thanks for your kindly interest. You will be notified when another number is published.

Your Sincerely

W.L. Jepson.

Hunt Institute for Botanical Documentation