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“The Botanical Collections of Eduard and Caecilie Seler”

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Eduard y Caecilie Seler

*Sistematización de los estudios americanistas
y sus repercusiones*

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Instituto de Investigaciones Interculturales

Germano-Mexicanas/

Ediciones y Gráficos Eón

2003

416 p.

Dibujos y fotografías

ISBN UNAM 970-32-0956-4

ISBN INAH 970-35-0369-1

Formato: PDF

Publicado en línea: 9 de marzo de 2018

Disponible en:

<http://www.historicas.unam.mx/publicaciones/publicadigital/libros/seler/409.html>

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The Botanical Collections of Eduard and Caecilie Seler

Paul Hiepko

Plant collections made by ethnologists, archaeologists and other researchers interested in plants in the course of their field work are often very disappointing for botanists, and it is very unpleasant to try to identify the usually fragmentary material. Today botanists are even asked for plant names on the basis of color slides, which is in most cases an impossible task. In contrast to these often very bad experiences, the collections made by Eduard Seler and his wife Caecilie were very well done, and according to a note by the director of the Berlin Herbarium, it was a very rich collection of well prepared plants.¹

Theodor Loesener, who was in charge of the identification of the plants, evaluates the collection of the second expedition as mostly excellently prepared, and not only by the quantity but also because of the detailed documentation of the habitat, use etc.; it was, according to Loesener, even more valuable than that of the first expedition.²

But it is not surprising that Seler made such excellent plant collections since he studied science including botany to become a teacher before he started his ethnological studies. First he studied at the University in Breslau (now Wrocław, Poland) and two years later went to the University of Berlin.

¹ "... eine sehr reichhaltige Sammlung gut getrockneter Pflanzen." Engler 1897: 287f.

² "im wesentlichen vorzüglich konserviert und nicht nur an Umfang, sondern auch durch genaue Angaben über Standorte, Verwendung etc. noch wertvoller als die der ersten Reise." Loesener 1899: 535.

He was very much interested in botany and collected plants for his herbarium wherever he lived. For some time he assisted his botany teacher, Alexander Braun, who was at the same time director of the Royal Botanic Garden and the Herbarium at Berlin. Another teacher of Seler at that time was the botanist Paul Ascherson. During the German-French war (1870/71) he became friends with Ignatz Urban, who was later one of the most famous botanists in Berlin; Urban was editor of the last 31 fascicles of the monumental *Flora brasiliensis* and author and editor of the outstanding work on Caribbean Flora titled *Symbolae antillanae*. Thus, the connection of Seler to the Botanical Garden and Museum in Berlin was very close, particularly since he lived very near that institution.

During their six expeditions to Central America (Chiapas, Yucatan, and Guatemala), the Selers collected ca. 6,000 numbered specimens of plants, many of them with several duplicates. The first set of this collection was given to the Royal Botanical Museum at Berlin, in order to be identified by the botanists of that institution. Seler's botanical collections were not only important for the floristic investigation of Central America. About 200 plant species and 5 genera new to science have been described and named by several botanists in Berlin and abroad, and many species new for the flora of Mexico and/or Guatemala were discovered among Seler's collections. Many of the new species have been named in honor of the Selers: 80 species names bear the epithets "selerae", "seleri", "seleriana (-um)", or "selerorum"; 13 names bear the epithets "caeciliae" or "caeciliana". The names of two of the five new genera were also based on Seler's name: "Selera" and "Selerothamnus". The results of the studies on the collections are included in many publications ("*Plantae selerianae*", 10 parts edited by the Berlin botanist Th. Loesener (1894-1923); *Mexikanische und zentralamerikanische Novitäten* I-VII, by the same author (1910-1922); the description of the vegetation of Yucatan by E. Seler (1904), and many other papers, some of which are cited by Loesener (1922: 323). Loesener also published an obituary with regard to the botanical activities of E. Seler (1923).

Since plant taxonomy and floristics are collection-based sciences, all old plant collections are still very important for the necessary documentation of biodiversity, especially for the tropical countries. The destruction of the greater part of the Berlin herbarium (including the majority of the Seler collections) in 1943 was therefore a major tragedy in the history of

systematic botany. But, fortunately, about one-half million specimens were saved and there are at least 150 Seler plants still extant in some families of flowering plants and in the pteridophytes (see Hiepko 1987). According to the *Collectors Index of Index Herbariorum* (1986), Seler duplicates have been distributed among 10 different herbaria, one in Europe (Kew, UK), eight in the United States (Cambridge, Mass., Chicago, New York, Saint Louis, San Francisco, and Washington), and one in Mexico (Herbario Nacional in Mexico City). The number of specimens is only given for Kew (K: 255), Chicago (F: 254), and Washington (US: ± 1000). One of the largest sets of duplicates could be at the New York Botanical Garden which, according to a note by Loesener (1899: 536), received the third set. When I checked the *Specimen Catalogs* on the internet homepages of the herbaria at New York and Washington, I found 43 and 80 type specimens respectively, from the Seler collection (types are the specimens on which the description and the name of a new taxon is based, and which are therefore of special importance in plant taxonomy).

The fact that the Selers not only noted the locality and habitat of the plants but also documented the uses and the plant names of the Mayas is of more general interest for ethnological, ethnobotanical, and ethnomedicinal studies. These names are all included in the above mentioned publications. A comparison with the principles of ethnotaxonomy based on ethnobotanical research in Chiapas (Berlin, Breedlove & Raven 1974) is not possible in detail since the names collected by Seler belong to many different ethnic groups. But the list of Mayan names from Yucatan (Loesener 1922a), which also includes names documented by the American botanist Millspaugh, shows features typical for vernacular names. There are 348 names which are mostly monomial (the “generics” of Berlin *et al.* 1974). The subdivisions of a generic are distinguishable through their binomial nomenclature: there are only four pairs of binomial names, e.g. “(sac) haaz” and “box haaz” for two different banana species, or “ek balam” and “xa balam” for two different species of *Urera*, a genus of the plant family *Urticaceae*.

Another ethnobotanically interesting fact is mentioned by Seler (1904: 379), which is typical for the naming of introduced useful plants: the word “haaz” is the old name of an indigenous fruit tree (zapote mamey) but is now used for the introduced banana; the name for the zapote is changed by adding “chacal” to “chacal haaz”.



I hope that I succeeded to give you an impression of the still valid importance of the plant collections of Eduard and Caecilie Seler, especially with regard to the worldwide efforts for the documentation of biodiversity.

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