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A GUIDE TO FIELD STATIONS IN THE TROPICS: I. MEXICO

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A. GENERAL INFORMATION

70-51.

Herbaria: The National Council for the Flora of Mexico (Consejo Nacional de la Flora de México) recently published a revised edition of the catalogue of Mexican herbaria (Arreguín & Valenzuela 1986). This contains information on 58 institutional herbaria including name, accepted acronym -when available-, number of specimens, important collections, available services, staff research interests, geographical coverage, etc.

The most important among the Mexican herbaria is the National Herbarium (MEXU) which in 1986 contained more than 495,000 specimens and was actively involved in the preparation of several regional floras; the same is true of the herbarium of the Escuela Nacional de Ciencias Biológicas (ENCB), with more than 463,000 specimens at that time (cf. Arreguín & Valenzuela 1986).

Collecting permits: Every collector, whether national or foreign, is expected to have a permit while obtaining specimens in the field. Application for permits and information on plant collecting in México should be addressed to: Dra. Graciela de la Garza García/ Dirección General de Conservación de los Recursos Naturales/ Río Elba No. 20, 8o. Piso/ Col. Cuauhtémoc/ 065600 México, D.F./ Tel. 286-

Since collecting permits for foreign collectors usually take a long time to negotiate, those requiring them are urged to apply well in advance. It is usually required to secure the support of a local university or research institution; this association facilitates travel and shipment of plant materials for the foreign scientist; he may depend on the local institution to assist him in making pertinent arrangements. The host institution may provide letters of introduction and allow for the use of plant driers and storage space. Government regulations require that you leave a set of (identified, labelled) specimens at a local herbarium and submit copies of subsequent publications; these requirements may be best satisfied by working in close contact with your host institution.

Export of specimens: Export permits are required to send botanical specimens abroad. This is a time-consuming and expensive enterprise, especially for scientists not connected with a local research institution. It is recommended that botanists inquire about regulations when applying for permits or leave their specimens in care of their host institution. The latter may require reimbursement for mailing expenses, especially if air mail or insurance is desired.

B. STATIONS

There are several types of protected natural areas in Mexico which may be of interest to biologists; some of them have research facilities and may qualify as 'biological stations'. The reader is referred to Vargas (1984) and Alcérreca et al. (1988) for discussion, definitions, listings and legal information. Strictly speaking, it seems that there are only three such stations concerned with terrestrial communities; they are described below. Rancho El Cielo in southern Tamaulipas, apparently owned by the Southwestmost College of Brownsville, Texas has been used as a biological station, but there is no additional information, except that it is now part of a biological reserve. For those interested in marine organisms the Instituto de Ciencias del Mar y Limnología, UNAM (Apartado Postal 70-157/ Cd. Univ., Del. Coyoacán/ 04510 México, D.F.) operates four stations in coastal areas. Information on these should be requested from Dr. José Carranza, Director, at the address given above.

1. ESTACION DE BIOLOGIA TROPICAL LOS TUXTLAS

Location: State of Veracruz, 33 km N of Catemaco, located between 18°34'-18°36'N and 95°04'-95°09'W; altitude is ca. 530 m. Access to the station is by a dirt road which leaves Catemaco northward toward Montepío. It takes about an hour to reach the station grounds, depending on climatic conditions, but no special vehicle is required.

Owner: Universidad Nacional Autónoma de México. Contact address: Secretario Técnico/ Instituto de Biología, UNAM/ Apartado Postal 70-233/Cd. Univ., Del. Coyoacán/ 04510 México, D.F.

Fees and station facilities: Current charges are \$18.00 US, including room and 3 meals. There is room for 15 individuals, but application for admittance should be submitted at least three months in advance;

application forms are available from the above address and should be sent with a statement on projected activities, methods, bibliography, etc. Each application will be evaluated and the results communicated to the applicant. Payment should be made in advance.

Biological specimens may not be collected on the station grounds without formal approval of the chairman and only in connection with an accepted project.

Laboratory equipment - such as microscopes, oven and scales - is available; the station has a library and plant and animal reference collections.

Each individual is responsible for his/her own special needs and should carry labels, bags, hand lamps, antiviperine serum and syringes and other personal items.

Food may be unnecessary unless a special diet is followed.

Vegetation: Tropical rain forest and successional stages induced by previous disturbance. Individual trees in the forest reach heights of 40 m or more; the upper story includes species of *Bernoullia*, *Poulsenia*, *Vochysia*, *Cymbopetalum*, *Zanthoxylum*, *Sapium*, etc.

References: The following make direct reference to Los Tuxtlas Biological Station:

Chavelas P., J. et al. (1972) Excursión al Sureste. In: Guías Botánicas de Excursiones en México, Sociedad Botánica de México, p. 75-158.

Coates-Estrada, R. & Estrada, A. (1985) Lista de las aves de la Estación de Biología de los Tuxtlas. Instituto de Biología, UNAM. 41 pp.

Coates-Estrada, R. & Estrada, A. (1986) Manual de identificación de campo de los mamíferos de la Estación de Biología "Los Tuxtlas". Instituto de Biología, UNAM. 151 pp.

There are numerous additional publications dealing with biological aspects of

individual organisms in this and neighbouring areas. Readers are referred to the *Anales del Instituto de Biología, UNAM* and other tropical biology journals for references concerning research projects developed at the station.

2. ESTACION DE BIOLOGIA CHAMELA

Location: State of Jalisco, Bahía de Chamela, between 19°30'-19°33'N y 105°00'-105°04'W; altitude is ca. 500 m. Access to the station is by Federal Hwy. 200 which follows the coast in a NW-SE direction.

Owner, contact address, fees and station facilities: see pertinent data under "Estación de Biología Tropical Los Tuxtlas".

Vegetation: The main types of vegetation include the "Selva baja caducifolia", "Selva mediana subperennifolia", riparian vegetation, mangrove forest, xerophytic scrub and palm forest. The first is the most important type of vegetation in the area of the Chamela Biological Station; this is a dry deciduous forest, reaching up to (5-)10 m in the upper story. The important tree genera include *Cordia*, *Caesalpinia*, *Lysiloma*, *Lonchocarpus*, *Heliocarpus*, etc.

Reference:

Ceballos, G. & Miranda, A. (1986) Los mamíferos de Chamela, Jalisco. Manual de campo. Instituto de Biología, UNAM. México, D.F. 436 pp.

3. ESTACION BIOLOGICA EL MORRO DE LA MANCHA

Location: State of Veracruz, in the Gulf coastal plain, at 19°36'N and 96°22'W, about 30 km NE of Ciudad Cardel. Access to the station

is by Federal Hwy. 180 to Nautla; an eastward dust road leaving the highway around km 27.5 from Cardel, takes the visitor near the station grounds.

Owner: Instituto de Ecología.

Contact address: Dr. Pedro Reyes/ Instituto de Ecología/ Apartado Postal 63/ Xalapa, Ver.

Fees and station facilities: Information is not available as the station recently changed ownership.

Vegetation: The main types of vegetation in the area include the "Selva Mediana Subperennifolia", "Selva Baja Caducifolia", Mangrove and Sand dune vegetation. The first is highly disturbed and includes *Brosimum alicastrum*, *Bursera simaruba* and *Ficus obtusifolia* among the trees. The second, the deciduous forest, is widespread in the area; the tree species seldom reach more than 4-6 m in height and include *Coccoloba barbadensis*, *Bursera* spp. and *Elaeodendron laneanum*. The Mangrove is also widespread and contains *Rhizophora mangle*, *Avicennia germinans*, *Laguncularia racemosa* and *Conocarpus erectus*. The sand dune vegetation occupies the beach with such herbaceous plants as *Ipomoea* spp. and *Sesuvium portulacastrum*.

References: The following make direct reference to the station:

- Novelo R., A.** (1978) La vegetación de la Estación Biológica El Morro de la Mancha. *Biótica* 3: 9-23.
- Moreno-Casasola, P. et al.** (1982) Ecología de la vegetación de dunas costeras: Estructura y composición en el Morro de la Mancha, Ver. *Biótica* 7: 491-526.

REFERENCES

- Alcérreca A., C. et al.** (1988) Fauna silvestre y 'areas naturales protegidas. *Universo*

Veintiuno. México, D.F. 193 pp.

Arreguín, M. L. & Valenzuela, R. (1986) Segundo catálogo de los herbarios institucionales mexicanos. Consejo Nacional de la Flora de México. México, D.F. 143 pp.

Vargas M., F. (1984) Parques Nacionales de México y reservas equivalentes. Instituto de Investigaciones Económicas, UNAM. México, D.F. 266 pp.