

VII. EDIBLE SEAWEEDS OF THE PHILIPPINES.¹⁴

In connection with the series of articles on minor marine products, it has been thought advisable to include what is known regarding the edible seaweeds, with the hope that the publication of the meager data available may stimulate interest in the subject. Below is given a list of the species known to be used for food, and it is confidently expected that eventually it will be greatly extended as data on the subject become available. Very little seems to have been published on the subject. The determinations have kindly been made by Dr. M. A. Howe, of the New York Botanical Garden. The list is for the most part based on a collection made by Eugenio Fénix of the Bureau of Science, in Union Province, Luzon, supplemented by some local observations in and about Manila.

In most parts of the Philippines, along the seashore, various species of marine algæ or seaweeds are found, although in this Archipelago as in most tropical countries, these are not found in masses, or in such great quantities as is the case with many forms in temperate regions, at least in shallow waters.

The first impression on studying Philippine algæ is that the number of species is very limited, but intensive collecting has brought to light a considerable number and, doubtless, as botanical exploration progresses, the list of Philippine algæ will be greatly increased. In some regions the marine algæ play no small part in the economy of the natives, a considerable number being used for food, thus entering into the local commerce.

At the present time a large percentage of our material is unclassified. Doubtless very many of our species are used for food, but collectors have given this phase of the subject comparatively little attention, so that the data on the utilization of local marine algæ are very fragmentary.

Seaweeds are used for food both raw, in the form of salads, and cooked sometimes with vegetables, such as tomatoes, and sometimes with the addition of sugar, forming the dish, popular among the natives, known to the Tagalogs as *gulaman*. It is probable that in Manila, at least, a large part of the *gulaman* is made from prepared seaweeds imported by the Chinese, although the local product is almost always to be found in the markets. In Manila various species of algæ are known as *gulaman*, but the most important appear to be *Aghardiella* sp. (*Fucus gulaman* Blanco), and *Gracillaria confervoides* (L.) Grev.

¹⁴Data supplied by E. D. Merrill, botanist, Bureau of Science.

Aghardhiella sp. (*Fucus gulaman* Blanco). This species is common in Manila Bay and is universally known to the Tagalogs as *gulaman*. It is probably the most generally used species in Manila, and during certain seasons is almost always to be found in the native markets.

Chaetomorpha crassa (Ag.) Kütz. Known in Union Province as *cauat-cauat*, and locally used for food.

Codium tenue Kütz. Known in Union Province as *pupu-lo*; edible.

Enteromorpha intestinalis L. This green alga is abundant in brackish water about the mouths of streams, and is eaten by the natives to some extent.

Euचेuma spinosum (L.) J. Ag. Known in Union Province as *rupruppuuc*; edible.

Gracillaria confervoides (L.) Grev. Abundant in Manila Bay at certain seasons, locally known as *gulaman*, and sold in the native markets of Manila.

Gracillaria crassa Harv. Used for food in Union Province; known to the Ilocanos as *susueldot-baybay*.

Gracillaria euचेumoides Harv. Known in Union Province as *canot-canot*; edible.

Gracillaria lichenoides (L.) Grev. Known in Union Province as *guraman*; edible. The above four species are allied to a Japanese species largely used in the manufacture of agar-agar.¹⁵

Halymenia formosa Harv. Known in Union Province as *gamet*; there used for food. An allied species found in Manila Bay, native name unknown, is doubtless also edible.

Liagora cheyneana Harv. Known in Union Province as *baris-baris*; edible.

Sargassum siliquosum J. Ag. Known in Union Province as *aragan*, there used for food. Widely distributed in the Philippines, as are several other species of the genus, all of which are doubtless utilized to a greater or less extent as food.