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BY

H. C. NELSON, M. D.,

SURGEON, U. S. NAVY,

ASSISTANT TO THE BUREAU OF MEDICINE AND SURGERY.

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REPORT ON COCA OR CUCA.

(*Erythroxyton coca.*)

By BENJAMIN F. GIBBS, M. D.,

SURGEON U. S. NAVY.

While on a visit in the vicinity of Tacua, distant forty miles from Arica, Peru, I procured a good specimen of the leaves of the coca, or cocua, as it was formerly called. The plant is described in the books as *Erythroxyton coca*, and reference is made also to its wonderful properties in enabling the native Indians to pass several days without food and undergo great fatigue. In regard to this, I find they always eat at night. It is prepared by chewing the fresh leaves and mixing with lime. This mixture is used as a masticatory, much in the same manner as the natives of the East use the betel-nut. The plant bears some resemblance to the *Thea bohea*, as I have seen it in the Bohea Hills above Foo-Chow, China, both in size of the plant and shape of the leaves. The latter are, however, in the tea-plant serrated on their edges, while these are smooth, with parallel veins. The veins of the leaves of the tea-plant are reticulated. The coca-plant grows from 4 to 6 feet high, and is largely cultivated in Bolivia. The properties ascribed to it are directed more to the nervous system, and are said to increase the contractile force of the heart. It apparently aids in causing the extraction of the largest amount of nutriment from the least quantity of food. The natives carry with them, for the longest day's journey over the mountains, but a few handfuls of parched corn, and are sustained by the increased nutriment they procure by chewing the coca and swallowing the saliva.

I am inclined to believe that the great virtues ascribed to the coca arise from the direct stimulation of the cardiac muscular fiber. This stimulation is demanded during these mountain journeys through the most rarefied atmosphere. These journeys often oblige them to pass through altitudes ranging from 15,000 to 20,000 feet above the sea. The journey from Tacua to La Paz, one hundred and twenty miles, obliges the following of a trail which passes an altitude of 17,000 feet. External hemorrhage through the mucous membranes is not uncommon, called the "sorochi." Nervous stimulants afford relief; and in this light we may very reasonably conclude that the coca finds its greatest value in assisting the natural force of the heart to make its greatest effort to enable the Indians to pass the summit of the Andes.

I am preparing an alcoholic extract made from the leaves, and shall make further experiments with this drug.

ARICA, PERU, *June 16, 1875.*