

far the most important plant of the order. It is a shrub from 5 to 10 feet in height. The leaves are a delicate bright green, lighter on the under surface, usually smooth, alternate, from one to three inches in length. The distinguishing characteristic of the leaf is, however, two arched lines, one on either side of the midrib, which meet at each extremity; these marks or lines are caused by the folding of the leaf in the bud. The flowers are small, whitish or greenish, and the fruit is a one-seeded, oblong berry about the size of a pea. This plant is found wild, and is cultivated in several of the South American States, notably in Peru, Bolivia, Equador, Brazil, etc. The leaves are the part used, either chewed or taken in the form of infusion as tea. The gathering, curing and packing requires great care, as they lose their active properties when bruised. When dry they are packed in parcels of about 24 pounds weight, and are worth about 25c. a pound. The Indians, the chief consumers of this drug, formerly held it in superstitious reverence, calling it the divine plant, and consider it as a sort of sanctuary of their God; they put the leaves in the mouth of the dead as a propitiatory offering. Formerly it was only used by the kings, priests, and those whose virtues or actions in war, or otherwise, rendered them worthy to be thus rewarded. By degrees, however, this plant came into general use, and is now the chief stimulant and narcotic of the Indian, and one much used by him. Like tobacco and alcohol, it may be, and indeed is, useful and healthful in moderation, but very disastrous in its effects when taken in excess. Those who use the coca generally chew the leaves, rolling them up in a ball, and adding a little quick lime or wood ash to them, by means of a slip of wood or needle carried for the purpose. This addition brings out the taste, strength and flavor to a greater extent. The chewing is speedily followed by a copious supply of greenish saliva, part of which is swallowed and part ejected. When one lot of leaves is exhausted, a fresh ball is prepared. The Indian lies down, or rests in some other way, during this process of chewing, which usually lasts from ten minutes to half an hour, according to the quantity of work to be done, or the amount of fatigue undergone; his period of rest is taken two or three times a day. After finishing the chewing the Indian gets up, lights a cigarette and returns to his labor, strengthened and refreshed. An Indian chews about an ounce of leaves in the 24 hours. There is no doubt that this plant, used in moderation, is most useful in enabling a person to endure prolonged exertion, fatigue, hunger, and cold; many would perish on the march across the Andes were it not for this drug. Like everything else, the use of coca may be abused, and in that case has very disastrous results, and, curious to say, the abuse is generally seen among the whites (if so you may call the swarthy Brazilian, Bolivian, or Peruvian, etc.). As it is an Indian habit, it is not considered genteel, so that the Bolivian or Peruvian gentleman is ashamed to indulge in it before others, he therefore retires to

his room and chews his coca in solitude. If the habit grows upon him, and he gives himself up to excess, he retires for days to the woods, and chews his beloved drug. He is now considered as lost by his friends, and is looked upon as an irreclaimable drunkard is with us; any one giving up in this way to the habit soon leaves the towns and societies of civilized men, and betakes himself to the woods and Indian villages, there to drag out the remainder of his miserable existence. He is called a "coquero," and becomes an object of contempt and loathing to his friends. The result of chewing to excess is an abominable breath, pale lips, yellow skin, sunken eye, an unsteady gait, distressing dyspepsia, and, eventually, dropsical swellings, boils and death. On the other hand when taken moderately it is harmless, and even conducive to health, especially to those living in want and exposure. Coca chewers are usually very long-lived. Coca has two very important properties: 1st. It lessens the necessity for food, and gives great endurance in fatigue. The Indian toils day after day in the tropical sun, or carries heavy burdens long distances, having only a handful or so of maize as food; he however works well, and is cheerful, if he be not deprived of his coca. In fact, it may almost be made a substitute for food. 2nd. The leaf, either chewed, or taken as an infusion, prevents the difficulty of respiration felt in ascending the Andes. This fact has led to its trial in some forms of chest complaints. It has been tried with much benefit in emphysema, pulmonary œdema, in the dyspnoea of functional heart disease, asthma, consumption, various forms of dyspepsia, etc., etc.

Though it is true that all writers, and all those who have either used the drug, or seen it used in its native clime, abundantly testify to its wonderful powers in assisting respiration while crossing the Andes, etc., in supporting and sustaining the vital powers while undergoing severe and protracted exposure and labor without sufficient food or rest, yet experiments tried in England and elsewhere go to prove that the wonderful powers attributed to it are nearly all, if not entirely, wanting. Weston, the pedestrian, in a letter to the *Lancet*, states that in his case it was worse than useless, and, in fact, attributes to trying it a fit of vertigo which seized him during one of his feats.

Mr. Dowdswell made some very extended experiments with it at the laboratory of the University of London, and concludes that his results are at the best negative. On the other hand, some claim to have seen benefit follow its use. One gentleman, in a letter to the *Lancet*, although disclaiming any benefit from its use in increasing his powers of endurance, states that it had a wonderful action on his nervous system. It seems this gentleman was extremely nervous while shooting, and usually missed his bird, however, after taking the coca his nervous system seemed so fortified that his game bag, instead of remaining empty as usual, was soon well stocked. Now how can these discrepancies be explained, that in Peru, Bolivia, etc., the results are so marvellous,