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THE ADULTERATION OF COMMERCIAL COMMODITIES.

TEA, COFFEE, COCOA, AND PEPPER.

TEA, the well-known Chinese plant, genus *thea*, is so extensively used in this country as to be classed among the necessities of life. It is imported from China in vast quantities, and is supposed, in many instances, to be extensively adulterated before it enters into consumption.

To ascertain whether other than tea leaves have been substituted for or mixed with genuine tea : To do this effectually it is necessary to acquire a thorough acquaintance with the character and appearance of the tea-leaf, and also of the leaves which are sometimes mixed with tea in the various stages of their growth, especially the condition of the hedges, and the arrangement and distribution of the bundles of woody fibre and vessels called veins. To form an idea of the general appearance of the tea-leaf, and of the leaf of the poplar, elder, sloe, and oak, they ought to be seen, or at least a diagram of them. From which it will easily be perceived that the tea-leaves have a different structure from the sloe and elder, which are most commonly substituted for them. They are more elongated and more delicately serrated. Before examination the leaves should be untwisted by infusion or moisture. They should then be submitted to the microscope, by which the tea will, in most instances, be distinguishable from the substitutes, even if the latter be rubbed or ground into very small pieces. Another mode of distinguishing tea-leaves from others, is by infusing a large portion of each. Genuine tea contains gum, gluten, or saccharine matter, a large quantity of *tannin*, and a peculiar nitrogenized principle called *theine*. The leaves of