and Borneo, distinguished by its peculiar coloration, the head, neck, fore and hind limbs being glossy black, and the inter­mediate part of the body white, the height at the shoulder from 3 ft. to 3 ft. 6 ins., and 4 ins. higher at the rump; *T. terrestris,* the common tapir of the forests and lowlands of Brazil and Paraguay; and *T. roulini,* the Pinchaque tapir of the high regions of the Andes. All the American species are of a nearly uniform dark brown or blackish colour when adult; but it is a curious circumstance that when young (and in this the Malay species conforms with the others) they are con­spicuously marked with spots and longitudinal stripes of white or fawn colour on a darker ground.

In habits all tapirs appear to be very similar. They are solitary, nocturnal, shy and inoffensive, chiefly frequenting the depths of shady forests and the neighbourhood of water, to which they frequently resort for the purpose of bathing, and in which they often take refuge when pursued. They feed on various vegetable substances, as shoots of trees and bushes, buds and leaves, and are hunted by the natives of the lands in which they live for the sake of their hides and flesh.

The singular fact of the existence of animals so closely allied as the Malayan and the American tapirs in such distant regions of the earth and in no intervening places is accounted for by the geological history of the race, for the tapirs once had a very wide distribution. There is no proof of their having lived in the Oligocene epoch, but in deposits of Miocene and Pliocene date remains undistinguishable generically and perhaps speci­fically from the modern tapirs (though named *T. pris cus, T. arvernensis,* &c.) have been found in France, Germany and in the Red Crag of Suffolk. Tapirs appear, however, to have become extinct in Europe before the Pleistocene period, as none of their bones or teeth have been found in any of the caves or alluvial deposits in which those of elephants, rhino­ceroses and hippopotamuses occur in abundance; but in other regions their distribution at this age was far wider than at present, as they are known to have extended eastward to China *(T. sinensis)* and westwards over the greater part of the southern United States of America, from South Carolina to California. Thus there is no difficulty in tracing the common origin in the Miocene tapirs of Europe of the now widely separated American and Asiatic species. It is, moreover, interesting to observe how slight an amount of variation has taken place in forms isolated during such an enormous time. See Perissodactyla. (W. II. F.; R. L.\*)

**TAPTI,** a river of western India. It rises in Betul district of the Central Provinces, flows between two spurs of the Satpura Hills, across the plateau of Khandesh, and thence through the plain of Surat to the sea. It has a total length of 450 m. and drains an area of 30,000 sq. m. For the last 32 m. of its course it is a tidal river, but is only navigable by vessels of small tonnage; and the port of Swally at its mouth, famous in Anglo- Portuguese history, is now deserted, owing to silting at the outflow of the river. The waters of the Tapti are nowhere used for irrigation.

**TAR,** a product of the destructive distillation of organic sub­stances. It is a highly complex material, varying in its com­position according to the nature of the body from which it is distilled,—different products, moreover, being obtained ac­cording to the temperature at which the process of distillation is carried on. As commercial products there are two principal classes of tar in use—(1) wood tar, the product of the special distillation of several varieties of wood, and (2) coal tar *(q.v.),* which is primarily a by-product of the distillation of coal during the manufacture of gas for illuminating purposes. These tars are intimately related to bitumen, asphalt, mineral pitch and petroleum.

*Wood Tar.—*Wood tar, known also as Stockholm and as Archangel tar, is principally prepared in the great pine forests of central and northern Russia, Finland and Sweden. The material chiefly employed is the resinous stools and roots of the Scotch fir *(Pinus sylvestris)* and the Siberian larch *(Larix sibirica),* with other less common fir-tree roots. A large amount of tar is also prepared from the roots of the swamp pine (P. *australis)* in North and South Carolina, Georgia and Alabama, in the United States. In the distillation of wood a series of products, including gas, tar, pyroligneous acid, acetone, wood spirit (see Methyl Alcohol) and charcoal may be ob­tained, and any of these may be the primary object of the operation.

The carbonization of wood can be effected in two ways: (1) by stacking and firing as in the manufacture of charcoal : this method is very wasteful as it is impossible to recover the valuable by­products; and (2) by distilling from retorts, ovens or kilns (after the manner of coke production from coal) : this method is more economical as it leads to the isolation of all the by-products. The retorts may be horizontal or vertical and the heating effected by any available fuel, or by the inflammable gases and less valuable grades of tar obtained in previous operations. The condensing plant is also of variable design; a common pattern consists of a connected series of slightly inclined copper pipes contained in a rectangular tank of water (see Coal Tar). After settling the distillate separates into three layers: the lowest consists chiefly of tar and creosote oils with a little acetic acid; the middle layer consists of water, containing pyroligneous acid, wood spirit, acetone with a little tarry matter; whilst the upper consists of light hydro­carbons. The tarry layer is run off by means of a cock near the base of the tank, and is then distilled from retorts resembling coal tar stills. At first, between 110° and 120° C., water and acetic acid comes over; then, between 120°—230° C., the heavy or creosote oils; the residue in the still is wood pitch, which finds application in making briquettes, artificial asphalts, certain varnishes, &c. The crude tar and pitch arc also largely used as protective coatings for woodwork exposed to atmospheric conditions. The heavy oils on further fractional distillation yield more acetic acid, and then mix­tures of carbolic acid, creosols, &c.

Wood tar is a semi-fluid substance, of a dark brown or black colour, with a strong pungent odour and a sharp taste. Owing to the presence of acetic acid, it has an acid reaction; it is soluble in that acid, as well as in alcohol and the fixed and essential oils, &c. Some varieties of tar have a granular appearance, from the presence of minute crystals of pyrocatechin, which dissolve and disappear on heating the substance.

See P Dumesny and J. Noyer, *Wood Products, Distillates and Extracts* (Engl. trans. 1908).

*Medicine.*—Wood tar is used in medicine under the name of *Pix liquida.* Its preparation *unguentum picts liquidae* is composed of wood tar and yellow beeswax. Externally tar is a valuable stimu­lating dressing in scaly skin diseases, such as psoriasis and chronic eczema. Internally wood tar is a popular remedy as an expectorant in subacute and chronic bronchitis. It is usually given as tar water, 1 part of wood tar being stirred into 4 parts of water and filtered. Given internally tar is likely to upset the digestion ; taken in large quantities it causes pain and vomiting and dark urine, symptoms similar to carbolic acid poisoning.

Coal tar is used in medicine as *Pix liquida preparata.* From it is made *Liquor picis carbonis,* prepared with tincture of quillaia. Coal tar is rarely prescribed for internal use. Its external use is similar to that of wood tar: the *Liquor carbonis detergens,* a pro­prietary preparation, owes its properties chiefly to the contained phenol. It is used in water as a lotion for skin diseases, and also in an inhaler in the treatment of whooping-cough, croup and bronchitis.