## OAK-GALLS

24. Oak-galls (French noix de galles, Portuguese galhas) are globular excrescences caused by the gall-wasp (Cynips quercus folii) puncturing the twigs, leaves, and buds, and depositing its ova in several species of oak (chiefly Quercus lusitanica var. infectoria), to be found in Asia Minor, Armenia, Syria, and Persia. In times of antiquity, galls were employed for technical and medicinal purposes. In consequence of their large percentage (up to 60 per cent) of tannic or Gallo-tannic acid, they served for tanning, still further for the dyeing of wool and the manufacture of ink.¹ Both Theophrastus² and Dioscorides³ mention galls under the name κηκίs. Abu Mansur describes galls under the Arabic name afs.⁴

The greater part of the galls found in Indian bazars come from Persia, being brought by Arab merchants. The Sanskrit name mājūphala (phala, "fruit") is plainly a loan-word from the Persian māzū.

In Chinese records, oak-galls are for the first time mentioned under the term wu-si-tse 無食子 as products of Sasanian Persia. They first became known in China under the Tang from Persia, being introduced in the Materia Medica of the Tang Dynasty (Tan pen ts'ao). The Tan pen ču 唐本注 states that they grow in sandy deserts, and that the tree is like the tamarisk (č'en 檉). A commentary, cited as kin ču 今注, adds that they are produced in Persia, while the Čen lei pen ts'ao says that they grow in the country of the Western Žun (Iranians). The Yu yan tsa tsu gives a description of the plant as follows: "Wu-ši-tse 無石子 are produced in the country Po-se (Persia),

<sup>&</sup>lt;sup>1</sup> Blümner, Technologie, Vol. I, 2d ed., pp. 251, 268.

<sup>&</sup>lt;sup>2</sup> Hist. plant., III. vIII, 6.

<sup>&</sup>lt;sup>8</sup> I, 146 (cf. Leclerc, Traité des simples, Vol. II, p. 457). See also Pliny, XIII, 63; XVI, 26; XXIV, 109.

<sup>&</sup>lt;sup>4</sup> Achundow, Abu Mansur, p. 98.

<sup>&</sup>lt;sup>5</sup> W. Ainslie, Materia Indica, Vol. I, p. 145; Watt, Commercial Products of India, p. 911.

<sup>6</sup> Sui šu, Ch. 83, p. 7 b.

<sup>&</sup>lt;sup>7</sup> According to another reading, "in sandy deserts of the Western Žun" (that is, Iranians).

<sup>8</sup> Ch. 14, p. 20.

<sup>9</sup> Ch. 18, p. 9.