

354. *UNCARIA GAMBIR* (Hunter) Roxb. (RUBIACEAE)—Gambir, Gambier, Pale Catechu

Gambir is widely used as a tanning material and is employed medicinally as an astringent. Gambir is the dried, aqueous extract prepared from the leaves and twigs. The drug contains catechutannic acid (22 to 50%) which resembles the tannin in kino (*Pterocarpus marsupium* Roxb.) and *Krameria*. Gambir is also used as a mordant in dyeing. In Malaya, it is used for chewing with the betel leaf; some believe it causes the reddening of the mouths of betel chewers. It is often planted in Malaya as well for the aromatic flowers.

Gambir is a powerful astringent, used in diarrhea. Spasmolytic activity has been reported for an unnamed alkaloid or base occurring in gambir. In Malaya, gambir is applied to burns and scurf. In Borneo, it is applied externally for lumbago and sciatica. In Johore, an infusion of fresh leaves and young shoot is taken for diarrhea and dysentery and used as a gargle for sore throat.¹⁶

According to the *Wealth of India*, gambir contains 22.50% catechutannic acid, 7 to 33% catechin, 3 to 5% mineral matter, small amounts of (+)-epicatechin, catechu-red, quercetin, fixed oil, wax, sugar, starch, cellulose, weak acids (probably 2,4 dihydrobenzoic and adipic) and their salts, and a mixture of fluorescent alkaloids (at least in commercial Italian samples). The alkaloid mixture (circa 0.05%) consists of gambirtannine ($C_2H_{18}N_2O_2$), oxogambirtannine ($C_{21}H_{16}N_2O_3$), and 3-14-dihydrogambirtannine. Gambirtannine has the skeleton of yohimbine, a reputedly aphrodisiac alkaloid that has received a lot of press lately. The *Dictionary of Chinese Traditional Medicine* also indexes roxburghines A, B, C, D, and E, rhynchophylline, isorhynchophylline, mitraphylline, rotundifoline, protocatechu tannins, and pyrogalllic tannins.⁴¹ *Hager's Handbook*³³ adds gambirine, ourouparin, dihydrocorynanthein, and 11-methoxyyohimbine, giving structure for these and other compounds, also reporting the active compound rutin. Pyrocatechol (up to 30%) has also been reported.