

loss was considerable. Epicatechol-3-D-glucoside dihydrate, isolated from the flowers, exhibited no oncostatic or cytotoxic activity. The pigment tentatively identified as dihydroxy-4-methoxyisoflavone, isolated from the fruit, exerted considerable oncostatic activity (and cytotoxicity). Triacanthine from the leaves was highly toxic ( $LD_{50}$  circa 35 mg/kg) and of questionable oncostatic activity.<sup>167</sup> Fruit pulp is used for catarrh of the lung.<sup>33</sup> Powdered seed used as a snuff for head cold. Some people, probably having seen the erroneous report of cocaine in the leaves, state that "ingestion of a suitable preparation of the leaf increases the capacity for muscular work and delays the onset of fatigue." Reported to be anodyne, mydriatic, narcotic, and experimentally oxytocic,<sup>32</sup> honey locust pods are a folk remedy for dyspepsia and measles among the Cherokee. The bark tea is used for whooping cough. Delaware Indians used the bark for blood disorders and coughs, the Fox for colds, fevers, measles, and smallpox. Chinese probed tumors and abscesses with the thorns of *G. sinensis*, considering them counterirritant.<sup>63</sup>

Per 100 g, the fruit is reported to contain on a zero moisture basis, 23.1 g protein, 4.6 g fat, 66.9 g total carbohydrate, 12.7 fiber, 5.4 g ash. The seed is said to contain 10.6 g protein, 0.8 g fat, 84.7 g total carbohydrate, 21.1 g fiber, 3.9 g ash, 280 mg Ca, and 320 mg P.<sup>21</sup> Fodder yields 0.81% of a mixture of two pigments, one named acrammerin  $C_{16}H_{12}O_8$  and another olmelin  $C_{16}H_{12}O_8$ , a flavonoid glucoside. Pod contains some tannin but no alkaloid and gives negative hemolysis tests. Bark contains a trace of alkaloid and the flower spikes 0.2%. The fruit is reported to yield 3.9 to 4.44% of glucose. The gum of the fruit and seed compare. The gum exuding from wounds contains calcium and strontium salts of D-glucuronic acid bound with anhydro-D-galactose and anhydro-L-arabinose.<sup>33</sup> Seeds contain mannogalactan and enzymes, 3% of fat, 21% of albumin, possibly a glycyrrhizin-like substance but no alkaloid, 1.9% of 1-epicatechol 3-D-glucoside dihydrate. Albumen of the seed on hydrolysis yields 94.2% reducing sugars which contain 70% galactose and 23% mannose. Light petroleum shows an oil, and phytosterol  $C_{30}H_{50}O$  to 0.5  $H_{20}$ . The oil contains dihydroxystearic acid, sativic acid, and an isomeric tetrahydroxystearic acid. The seed coat contains acetic acid, glucose, phlobaphen, and tannin, as well as polyphenols. Pericarp may contain alkaloids 0.02 to 0.05%; glucosides and anthraglucosides 2.5%; saponins and tannins 3.11%; proteins and other substances. The seed germ yields 7% of oil containing 0.056% tocopherols, while the hull-free cotyledon yields 4.9% oil containing 0.04% tocopherols. The leaf apparently contains two active principles, hypoxysin with oxytocic properties, and a neutral principle of gum-like consistence and having a direct depressant action on the blood vessel muscle resulting in vasodilation. The leaf contain much tannin.

**Toxicity** — Air-dried leaf yields 0.5% of an alkaloid triacanthine  $C_8H_{10}N_4$  which in intravenous doses of 0.1 mg/kg depresses the action of the cat heart, the intensity apparently depending on the intensity of effect on the vasomotor center. Heart-wood contains 4 to 4.8% tannin and, also, fustin ( $C_{15}H_{12}O_6$ ) and fisetin ( $C_{15}H_{10}O_6$ ).<sup>3 33</sup> The alkaloid gleditschine is said to produce stupor and loss of reflex activity in a frog. Stenocarpine has been used for local anesthesia. "It also contains cocaine."<sup>2</sup> To the best of my knowledge it does not contain cocaine! *N*-methyl-beta-phenylethylamine and tyramine are, however, reported.<sup>33 63</sup>