Animi,	Manila,	Argol,	Singapore,
Zanzibar,	Macassar,	Benguela (African),	Northcoet.
Copal,	Kovo,	Damar,	

The depression in the kauri-gum market may to a great extent be attributed to the large shipments of Manila gum which are going forward at the present moment.

THE IMPORTANCE OF KAURI-GUM IN THE MANUFACTURE OF VARNISHES, ETC.

To show the great value of kauri-gum in the manufacture of varnishes, &c., I append some extracts from an authoritative work entitled "A Few Notes on Varnishes and Fossil Resins," by R. Ingham Clark, F.L.S., F.R.G.S., &c., which speak for themselves.

J. GRAHAM GOW,
Trade Representative.

The Secretary, Department of Industries and Commerce, Wellington.

EXTRACTS FROM A BOOK ENTITLED "A FEW NOTES ON VARNISHES AND FOSSIL RESINS," BY R. INGHAM CLARK, F.L.S., F.R.G.S., ETC. PUBLISHED BY CHARLES LETTS AND CO., 3 ROYAL EXCHANGE, LONDON.

On the front page, "Compliments of Pratt and Lambert, Varnish-makers, New York and Chicago." On the last page, "Press of Robert L. Stillson, 514 Pearl Street, New York."

Pages 1 to 8 deal with the origin and antiquity of varnish. From the earliest times to the year 1884 the lacquer trade of Japan is dealt with. Lacquer is the crude sap of the *Rhus Vernicifera*, or lacquer-tree.

Pages 9 to 22 deal with the history of varnish-making in Europe, and comment on the varnish of the violin-makers of Italy, the secret of which was lost about 1760. Amber the supposed basis of this varnish. The uselessness of amber for varnish-making. Small and waste amber a drug on the market. A lot of 50 tons unsaleable at £20 per ton. Present consumption of gum for varnish-making, 3,000 tons per annum in England alone, by far the largest portion being kauri-gum. The various resins, kauri, animi, copal, &c., were commercially unknown in the seventeenth century, and many were unheard-of fifty years ago. Successful varnish-making a matter of personal experience with particular gums. The difference in production in 1832 and the present time, showing that to profitably manufacture in 1832 an output of 4,000 gallons per annum was necessary; at present an output of nearly that quantity per week is required. The fossil resins as a body are vulgarly designated copal, this being the general name in Mexico for all gums and resins. "Copal" of commerce supposed to have first been brought from Mexico.

Pages 24 to 26: Amber.—Amber is the resin of antediluvian coniferæ. Although met with in nearly all countries of the world, it is found in exceptionally large quantities in eastern Germany, on the shores of the Baltic and some Russian lakes. Mines of some importance are worked at Payentoung, in the valley of Hukung, Upper Burmah. The miners use tools of a primitive character, such as wooden crowbars tipped with iron, and wooden shovels. This amber is found in a stratum of cretaceous blue clay, irregularly associated with lignite. Slav and Chinese merchants buy this amber at 1s. per pound for the rougher sorts, but fancy prices are paid for special pieces suitable for jewellery or cigar-tubes. In some places this resin occurs in the brown-coal layer of bituminous wood, with pieces still adhering to the lower parts of trunks of trees. The larger pieces have always a pyramidal form, which attests distilation from trees, and removes all doubt as to its vegetable origin. As all resins are liquid in their first stage, they naturally envelope insects, consequently we find them present in almost every variety, but particularly so in amber. Bernard de Jussien has stated these insects do not belong to our continent or era, while Professor Zadbach, of Königsberg says that the trees yielding this resin (amber) must have grown upon the green sandbeds of the Cretacean formation which then formed the shores of the estuaries where the lower division of the Tertiary accumulated.

NOTE.—The ambris or fossil kauri-gum must be much older than amber.—E.G.F.

Pages 27 to 29: The animis.—Of the animis, the most noted and valuable is that exported from Zanzibar. The tree yielding this resin is now proved to be the *Trachylobium Verrucosam*, which is closely allied to the genus *Hymenæa*. Burton, Kirk, and Stanley have written detailed descriptions of the finding of this gum. It was assumed that the ripe old kind called "sandarusi" by coast Natives was the product of extinct trees; but Sir John Kirk attributes it to the same species that yield the new resin "chakazi." The fields from which the older resin is collected lie some thirty miles from Kas Gomani in latitude 30° S., to Kas Delgado, in laittude 10° 41′ S. The gum is always found overlaid with vestiges of decayed vegetation usually some 4 ft. deep, and associated with red sandy soil. The finest quality is dug by the Hawandi Tribe from the banks of a river of that name: its surface is strongly marked with indentations and elevations, giving rise to the trade term of "goose-skin." The whole trade seems to be in the hands of a few local houses. In the London market the price ranges from £200 to £350 per ton. Animi breaks with a dull even fracture, and has neither smell nor taste. The specific gravity is 1·08, and melting-point is 450° Fahr. Small and irregular supplies, known by the name of Madagascar animi, reach England from Mozambique: they closely resemble the Zanzibar kind in character, melting-point, and specific gravity, but, owing to mixed quality and rough cleaning, have a much lower value. Of late years considerable quantities of so-called animi have been received from Demerara. This fossil resin, the exudation of the locust-tree (*Hymenæa Courbaril*) of British Guiana, is evidently collected from the old roots and trunks of trees of a much earlier period. Some remarkably beautiful specimens, brilliantly clear, and ranging from 10 lb. to 60 lb. in weight, and containing many ants and other insects, are frequently met with. For some time the cleaned