Present work. The aerial part was dried, powderized and extracted successively with light petroleum, CHCl₃ and ethanol. The light petroleum extract was saponified with 10% methanolic KOH. The unsaponifiable portion was taken into isopropyl ether and chromatographed on a silicic acid column, affording: Octacosane, $C_{28}H_{60}$; m.p. $60-62^{\circ}$, IR, NMR, m.m.p.; Dotriacontane, $C_{32}H_{66}$; m.p. 70-72, IR, NMR, m.m.p.; Stigmasterol, $C_{29}H_{48}O$; (M⁺ 412), m.p. $150-154^{\circ}$; [a] $-42\cdot4^{\circ}$, IR, NMR, UV; Co-TLC and m.m.p. Stigmasteryl acetate $C_{31}H_{50}O_2$ (M⁺ 454) m.p. $136-138^{\circ}$ [a] -45° .

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Key Word Index—Clematis drummondii; Ranunculaceae; stigmasterol; alkanes.

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RHAMNACEAE

CHRYSOPHANOL AND β-AMYRIN IN THE FRUITS OF KARWINSKIA HUMBOLDTIANA*

XORGE ALEJANDRO DOMÍNGUEZ and LETICIA GARZA

Departamento de Química, Instituto Tecnológico y de Estudios Superiores de Monterrey, Sucursal de Correos "J", Monterrey, N.L., Mexico

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Plant. Karwinskia humboldtiana, Zucc. Occurence. Northern part of Mexico. Uses. Medicinal, has a progressive paralysing action. It is toxic to cattle and human beings. Previous work. An unidentified quinone.

Present work. The dried fruit was extracted twice with light petroleum, extracts were chromatographed on silicic acid: (β -amyrin, $C_{30}H_{50}O$ (M⁺ 426), m.p. 197° (m.m.p. with authentic sample), [a], IR, NMR of triterpenol, and of its acetate. From the second extract was obtained chrysophanol—(1,8-dihydroxy-3-methylanthraquinone, $C_{15}H_{10}O_4$ (M⁺ 254), m.p. 197° UV, IR, NMR (m.m.p. co-TLC and IR with authentic specimen).

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- * Part XXI in the series "Mexican Medicinal Plants".
- ¹ M. Martínez, Plantas Medicinales de México (4th Edition), p. 501, Editorial Botas, Mexico (1959).
- ² J. M. Kingsbury, *Poisonous Plants of the United States and Canada*, p. 220, Prentice Hall, New Jersey (1964).
- ³ T. N. Shaver, Dissertation, Texas A & M. University (1966).

Key Word Index-Karwinskia humboldtiana; Rhamnaceae; chrysophanol.

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SCHROPHULARIACEAE

FLORAL FLAVONOIDS OF THE MIMULUS LUTEUS COMPLEX

A. M. FERRO, G. J. BALDWIN and R. K. VICKERY, JR.

Department of Biology, University of Utah, Salt Lake City, Utah 84112, U.S.A.

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THE Mimulus luteus complex of section Simiolus consists of three species: M. luteus L.,