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HYDROXYACETOPHENONE DERIVATIVES FROM *BACCHARIS GLUTINOSA*

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A reinvestigation of the aerial parts of "batamote," *Baccharis glutinosa* Pers. (Compositae), which previously gave baccharisoxide (1), flavones (2), and a labdane derivative (3), afforded a large variety of hydroxyacetophenone derivatives, the chromenes **1-8** (4-6), the benzofurans **9** (5), **10** (4), and **11** (7), as well as **12**, and the dimeric compounds **13-16** (8,9). The structure of **3**, sonorol, a new chromene was easily deduced from the ^{1}H-nmr spectrum which, of course, was very close to those of **1** and **2** (3). The position of the methoxy group was inferred from the chemical shift of the methoxy signal. Furthermore, the fragments in the mass spectrum supported the proposed structure. The compounds **13** and **14** already isolated from the extract were prepared from **15** and **16** by elimination of H_2O, with toluensulfonic acid (8).

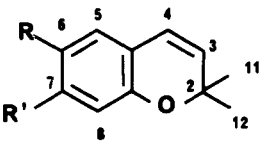
EXPERIMENTAL

GENERAL EXPERIMENTAL PROCEDURES.—The air-dried aerial parts (100 g of *B. glutinosa* collected in Hermosillo, Sonora, voucher #7739, deposited in the ITESM herbarium) were extracted with a mixture of hexane-CH_2Cl_2-MeOH (1:1:1).

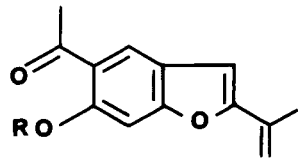
The extract obtained was first separated by cc (SiO_2). The fractions with Et_2O-petrol (1:4 and 1:1) gave by tlc (SiO_2, PF 254, Et_2O-petrol, 1:3) 7 mg of **8**, 12 mg of **2**, a mixture of **3, 5, 7, 9,** and **10**, which by repeated tlc (same solvent) gave 5 mg of **3**, 10 mg of **5**, 8 mg of **7**, 5 mg of **10**, and 6 mg of **9**; a mixture of **1, 4, 6, 11,** and **12**, which by repeated tlc (same solvent) gave 6 mg of **1**, 9 mg of **6**, 5 mg of **12**, 3 mg of **4**, and 3 mg of **11**, and a mixture of **13** and **14**, which by repeated tlc (C_6H_6) gave 2 mg of **13** and 3.5 mg of **14**.

The cc fraction obtained with Et_2O-petrol (3:1), gave by tlc (Et_2O-petrol, 1:1) 3.5 mg of **17**, 3 mg of **18**, 6 mg of **15** and 6 mg of **16**. Known components were identified by comparing the 400 MHz ^{1}H-nmr spectra with those of authentic material.

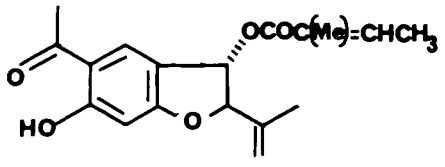
(SONOROL) 6-[1-METHOXYETHYL-7-HY-



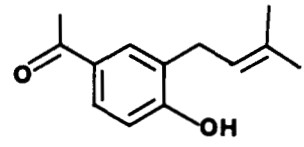
	1	2	3	4	5	6	7	8
R=	CH(OH)Me	CH(OH)Me	$CH(OCH_3)Me$	COMe	COMe	COMe	$COCH_2OH$	$CH=CH_2$
R'=	OH	OMe	OH	H	OH	OMe	H	OMe



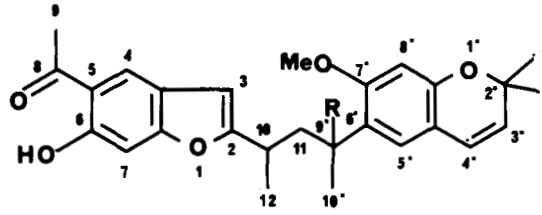
9 R=H **10** R=Me



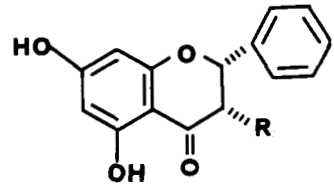
11



12



13 R=H, $\Delta^{11(9'')}$ 14 R=H, $\Delta^{9''(10'')}$
15 R=α OH 16 R=β OH



17 R=H
18 R=OAc

DROXY-2,2-DIMETHYL CHROMENE (**3**.—Colorless oil: ir ν max CCl_4, cm^{-1} 3589 (OH); ms *m/z* (rel. int) 234.126 $[M]^+$ (7) (calcd for $C_{14}H_{18}O_3$: 234.126), 219 $[M\text{-}Me]^+$ (26), 216 $[M\text{-}H_2O]^+$ (24), 201 $[219\text{-}H_2O]^+$ (100), 185 $[216\text{-}OMe]^+$ (19); ^1H nmr (400 MHz, $CDCl_3$) 5.47 (d, H-3), 6.30 (d, H-4), ($J_{3,4}$=10 Hz), 7.09 (s, H-5), 6.29 (s, H-8), 4.57 (q, H-9) (J=7 Hz), 3.26 (s, OMe), 1.30 (d, H-10), (J=7 Hz), 1.40 and 1.44 (s, H-12, H-13).

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