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CONSTITUENTS FROM *CHRYSACTINIA MEXICANA*

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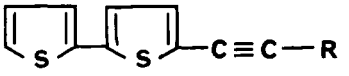
The small genus *Chrysactinia* previously was part of the subtribe Tageteae (Compositae, Tribe Heleniae), but recently has been transferred to the subtribe Pectidinae in the tribe Heliantheae (1). Little is known of the chemistry of the genus *Chrysactinia*; only some diverse compounds are reported from *Chrysactinia mexicana* A. Gray (2), which show no chemotaxonomic relationship to compounds typical of this subtribe.

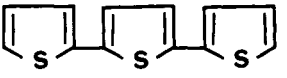
We, therefore, have reinvestigated this species. The extract of the aerial part gave the thiophene derivatives **1-4**, which are characteristic for the genus *Tagetes* and related genera, and 3*Z*, 6*Z*, 8*E*-dodecatriene-1-ol (**5**) (3). The structures of **1-4** were determined by direct comparison with authentic material.[1] The presence of **5**, which previously has been isolated as a termite trail-following pheromone (3), could be established by mass spectroscopy and by ^{1}H-nmr spectroscopy. The configurations of the double bonds followed from the couplings, while the positions were deduced by spin decoupling, which gave the whole sequence.

The isolation of **1-4** supports the position of the genus *Chrysactinia* in the subtribe Tagetae (4).

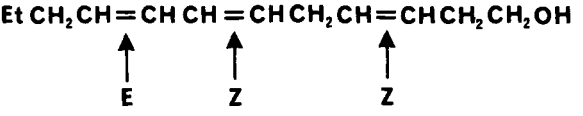
[1]Samples were supplied by Prof. Dr. F. Bohlmann.



1 R=CH=CH_2
2 R=CH_2CH_2OAc
3 R=CH(OAc)CH_2OAc



4



5

EXPERIMENTAL

The air-dried aerial parts (850 g), collected in Cerro de la Silla, Monterrey, and with a voucher specimen (#3602) deposited in the Herbarium of this Institute, were extracted with a mixture of hexane-CH_2Cl_2-MeOH (1:1:1) and the extract obtained was first separated by cc (SiO_2). The fraction obtained with Et_2O-petroleum ether, 1:3, gave on tlc (SiO_2, PF 254, Et_2O-petroleum ether, 1:4) 5 mg **1**, 5 mg **4**, 6 mg **2**, and 4 mg **3**. Tlc (Et_2O-petroleum ether, 1:4) of the cc fraction obtained with Et_2O gave 3 mg **5**, colorless oil, ir ($CHCl_3$) 3600 (OH), 3030, 1610, 940 (CH=CH) cm^{-1}; ms *m/z* (rel. int.) 180 $[M]^+$ (7), 149 $[M\text{-}CH_2OH]^+$ (22), 91 (38), 69 (42), 55 (100); ^1H nmr ($CDCl_3$, 400 MHz) 3.67 (t, H-1), 2.38 (q, H-2), 5.43 (dt, H-3), 5.55 (dt, H-4), 2.96 (t, H-5), 5.26 (dt, H-6), 5.97 (t, H-), 6.32 (dd, H-8), 5.69 (dt, H-9), 2.09 (q, H-10), 1.43 (tq, H-11), 0.91 (t, H-12); (*J* [Hz]: 1,2=2,3=4,5=5,6=9,10=10,11=11,12=7; 3,4=6,7=10; 9,10=15).

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