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MAJOR FLAVONOIDS OF *TEPHROSIA NUBICA*

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*Tephrosia* Pres. (Leguminosae-Papilionoideae) is a large tropical and subtropical genus estimated to contain about three hundred species (1). *Tephrosia* has been used medicinally and as a fish poison (2). Chemical studies on a number of species have revealed the presence of rotenoids (3, 4) and a range of isoflavones (5-8), flavanones/chalcones (9-13), flavonols (14-16), and flavones; prominent among the flavones is a group of 5,7-oxygenated (17-19) and 7-oxygenated (20-24) compounds characterized by the occurrence of a C-8 prenyl unit and prenylated flavan (25).

We undertook the chemical investigation of *Tephrosia nubica* (Boiss) Baker.

## EXPERIMENTAL

**PLANT MATERIAL.**—*T. nubica* was collected from Gabal Elba at the boundry between Egypt and Sudan and authenticated by Dr. Lofty Boulos, Professor of Taxonomy at the National Research, Cairo, Egypt.

**EXTRACTION AND ISOLATION OF THE FLAVONOIDS.**—Air-dried and powdered herb material of *T. nubica* (150 g) was defatted in a continuous extraction apparatus with petroleum ether. The defatted powder was then exhaustively extracted with MeOH in a Soxhlet apparatus. The alcoholic extract was concentrated under reduced pressure, and the resulting gum was extracted successively with CHCl<sub>3</sub>, EtOAc, and *n*-BuOH. The CHCl<sub>3</sub> residue (1.8 g) was subjected to flash column chromatography (54 g of silica gel), eluting with C<sub>6</sub>H<sub>6</sub>, C<sub>6</sub>H<sub>6</sub>-MeOH (99:1), (98:2), (97:3), (96:4), and (95:5). Fractions (50 ml) were collected by utilizing the distinctive fluorescence of the components as shown by tlc [CHCl<sub>3</sub>-MeOH (19:1) and C<sub>6</sub>H<sub>6</sub>-EtOAc (8:3) as solvent systems]. The least polar compounds obtained from the above column were further purified by silica gel ptlc using the Chromatotron with CHCl<sub>3</sub>-MeOH (99:1) and (98:2) as solvent systems. Complete purification of the compounds was achieved by semipreparative hplc (10×250 mm silica gel column, 5μ Supelco, hexane-EtOH, 4:1) which gave 10 mg of semiglabin (21), 5 mg of pseudosemiglabin (23), 30 mg of apollinine (23), and 50 mg of laneolatin (20). The structures of all compounds were determined by spectral analysis (ir, ms, and <sup>1</sup>H nmr) as well as comparison with published data.

Full details of the isolation and identification of the compounds are available on request from BBJ.

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