weight of the lipids, and the main component was PC. The algae of the second group contained appreciably smaller amounts of PLs and no PC were detected in them, the main PL being PE. Two PLs of unknown structure with chromatographic behavior close to that of the PC were found: X_2 – characteristic for all brown algae; X_3 – characteristic for the fucoids.

The green algae could also be separated into two group. Representatives of the first group contained not PC while those of the second contained about 30% of PC. In all the green algae the main PL was phosphatidylglycerol (PG) and only in these was phosphatidylserine (PS) detected.

Previously, the literature had contained quantitative information on the PLs of only three species of algae [3, 4, 6]. Our results substantially supplement this and permit a conclusion to be drawn that there is a well-defined link between the composition of the PLs and the systematic position of the algae.

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LACTONES OF *Artemisia argyi*

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Artemisia argyi Levl. et Vaniot. – an East Asian species from the genus *Angustilobae* Poljak., section *Artemisia* [1] – is readily distinguished from other species of the genus *Artemisia*. In the USSR, *A. argyi* is widespread in Primor'e and Priamuré, growing in dry-valley meadows along ther beds and the verges of roads, and it is possible to collect many tons of the herbage of this species. *A. argyi* is used in Chinese medicine for the treatment of intestinal diseases.

To isolate the lactones, the epigeal part of *A. argyi* collected in the late budding phase in the village of Kuguki, Ussuri region (Maritime Territory) in August 1983, was extracted with chloroform (1:5). The concentrated extract was treated with 40% ethanol. The precipitate was separated off and the filtrate was extracted with chloroform. The chloroform extract was deposited on a column of silica gel (type KSK) in a ratio of 1:20 and was eluted with benzene (fractions 1-47) and with benzene–acetone in ratios of 20:1 (fractions 48-72), 10:1 (fractions 73-78), and 5:1 (fractions 90-122). The fractions collected each had a volume of 600 ml. Fractions 49-56 of the eluates were evaporated, which led to the deposition of crystals of lactone (I) with the composition $C_{15}H_{18}O_5$. mp 226-227°C (benzene–acetone), M^+ $[\alpha]_D^{20}$ −25° (c 3.96; ethanol).

The IR spectrum of (I) showed an absorption band due to a hydroxy group (3515 cm^{-1}) to a γ-lactone carbonyl (1767 cm^{-1}), and to a double bond (1667 cm^{-1}).

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When the mother liquor from lactone (I) was rechromatographed on a column of silica gel with elution by benzene—acetone (30:1), crystals of the lactone (II), $C_{15}H_{18}O_5$, were isolated with mp 249-250°C (benzene—acetone), M^+ 278 $[\alpha]_D^{20}$ +26.5° (c 2.17; ethanol).

The IR spectrum of (II) had absorption bands of a hydroxy group (3440 cm^{-1}), of a γ-lactone carbonyl (1742 cm^{-1}), and of a double bond (1663 cm^{-1}).

The mass spectra of lactones (I) and (II) each contained a characteristic ion with m/z 111 (100%), showing the presence of two epoxide groups in the five-membered ring of a guanine skeleton [2]. The lactone (II) was dientified as chrysartemin B by driect comparison of IR spectra [3].

The PMR spectrum of (I) contained the following signals; singlets at 1.11 and 1.51 ppm of 3 H each (methyl groups at a carbon linked to an oxygen fraction); a doublet of 1 H at 2.67 ppm (proton at C_5, J = 11 Hz); two singlets at 3.19 and 3.38 ppm of 1 H each (gem-epoxide protons); a multiplet of 1 H at 3.86 ppm (proton at C_7); a triplet of 1 H at 4.42 ppm (lactone proton, ^3J = 11 Hz); two doublets of 1 H each at 5.23 and 6.04 ppm (the protons of an exomethylene group at a lactone ring, J = 3 Hz); and a singlet of 1 H at 6.84 ppm (the proton of a tertiary OH group).

Lactone (I) was identified as canin on the basis of the results of a comparison of PMR spectra, characteristics of its mass spectrum, and also its $[\alpha]_D$ value [4].

Fractions 98-106 of the eluates, on standing, deposite crystals of a lactone (III) with the composition $C_{15}H_{20}O_4$, mp 204-205°C (chloroform—acetone), M+ 264. Its IR spectrum contained absorption bands of a hydroxy group (3350 cm^{-1}), of a γ-lactone carbonyl (1764 cm^{-1}), and of double bonds (1645 and 1670 cm^{-1}). Lactone (III) was identified as isoridentin by a direct comparison of IR spectra [5].

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FLAVONOIDS OF *Artemisia cina*

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Two flavonoids have been isolated previously from *Artemisia cina* Berg. ex Poljak. (levant wormwood): transilin (7O-β-D-glucopyranosyloxy-3-O-methylquercetin) and vicenin-1 (apigenin 6,8-di-C-β-D-glucopyranoside) [1].

Aqueous ethanol (40%) eluted substance (I), $C_{16}H_{12}O_6$, yellow crystals with mp 265-268°C; $\lambda_{max}^{C_2H_5OH}$ 274, 337 nm (log ε 4.45, 4.64); 295, 375 nm (+$AlCl_3$ + HCl); 274, 337 nm (+H_3BO_3); 279, 357 (+CH_3COONa); 297, 389 nm (+$ZrOCl_2$); 274, 337 nm (+$ZrOCl_2$ + citric acid). IR spectrum (cm^{-1}): 2900-3200 (—OH); 1670 (C=O); 1610 (C=C); 2960 (—OCH_3). Alkaline cleavage led to the formation of p-hydroxybenzoic acid, showing the presence of a free 4'-OH group. PMR spectrum of the acetate of substance (I) ($CDCl_3$, δ, ppm): 7.75 (d, J = 8.0 Hz, H-2', 6'); 7.12 (d, J = 8.0 Hz, H-3', 5'); 7.20 (s, H-8); 6.50 (s, H-3). The signals of three acetyl groups were located in the 2.2-2.5 ppm region: 2.50 (5-CH_3COO); 2.26 (4'-CH_3COO); 2.21 (CH_3COO-7). An OCH_3 group revealed itself in the 3.75 ppm region [2].

On the basis of the results obtained, substance (I) was identified as 4',5,7-trihydroxy-6-methoxyflavone (hispidulin). Hispidulin has not previously been detected in wormwoods.

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