The mass spectrum of (V) showed the peaks of ions with m/e 341, 340, 326, 298, and 267; M^+ was absent.

From the spectral characteristics it may be assumed that the base is the N-oxide of corydine or of isocorydine. The reduction of (V) with Zn/HCl gave isocorydine [2], which was identified by comparison with an authentic sample.

This is the first time that isocorydine N-oxide has been isolated from plant raw material and it is therefore a new alkaloid.

This is the first time that isoboldine, thalicmidine N-oxide, and reticuline have been isolated from plants of the genus *Berberis*.

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GALANTHAMINE FROM SOME SPECIES OF THE FAMILY AMARYLLIDACEAE

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UDC 547.94+581.19+582.572.4

Continuing a search for new possible sources of galanthamine among plants of the family Amaryllidaceae, we have investigated *Eucharis subedentata* Benth., *Vallota speciosa* Th. Dur. et Schinz (introduced species obtained from the V. L. Komorov Botanical Institute of the Academy of Sciences of the USSR), and *Galanthus nivalis* L., subsp. *angustifolius* (G. Koss) Artjushenko, which we collected in the Kabardino-Balkarsk ASSR. There is no information in the literature on the presence of galanthamine in these species [1-7].

The comminuted air-dry leaves and bulbs were moistened with a 15% solution of ammonia and extracted with a mixture of chloroform and ethanol. The extraction was carried out by treatment on a shaking machine for 2 h or by steeping for 18 h. The filtrate was evaporated to dryness. The combined alkaloids extracted from the raw material were dissolved in ethanol and chromatographed on a fixed alkaline layer of KSK silica gel in the chloroform—ethyl acetate—ethanol (2:2:1) system. After treatment with iodine, the bands corresponding to galanthamine were separated off and galanthamine was eluted with a mixture of chloroform and methanol. The operation was repeated several times. After evaporation, samples of substances were obtained which were identified by comparing their NMR spectra with those of an authentic sample of galanthamine. The constants of the galanthamine corresponded to those given in the literature [1].

The quantitative contents of galanthamine determined by a chromatocolorimetric method were: in *Eucharis subedentata*, leaves 0.10%, bulbs 0.05%; *Vallota speciosa*, leaves 0.05%, bulbs 0.05%; *Galanthus nivalis* L. subsp. *angustifolius*, leaves 0.05%, bulbs 0.73%, calculated on the absolutely dry weight of the raw material. This is the first time that galanthamine has been isolated from the species mentioned.

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ISORESERPININE FROM *Vinca herbacea*

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From the herbaceous periwinkle (*Vinca herbacea*, Waldst. et Kit.) (family Apocynaceae) growing in Georgia we have isolated an alkaloid in the form of white acicular crystals with mp 224-226°C, $[\alpha]_D^{20}$ −18° (c 1.1; pyridine).

The PMR spectrum of the alkaloid has a group of signals in the weak-field region (aromatic and —O—CH protons), two singlets or methoxy groups at 3.71 and 3.63 ppm, and a doublet from a C-methyl group at 1.33 ppm. The spectrum was taken on a Varian T-60A spectrophotometer (Switzerland) with a working frequency of 60 MHz in acetone-d_6 solution. HMDS was used as internal standard.

The mass spectrum of the compound showed the following main peaks: of the molecular ion with m/e 382, of fragments formed from the molecular ion with m/e 367, 351, 323, 214, and 200, of ions with m/e 297, 281, 253, and 199 arising from the $(M - 1)^+$ ion, and of ions with m/e 186 and 295 formed from the ions with m/e 214 and 297, respectively. The mass spectrum of the base was recorded on a Varian CH-6 instrument (Switzerland) with a system for the direct introduction of the sample at a temperature of 200°C and an energy of the ionizing electrons of 70 eV.

A comparison of the results of spectral analysis and the physicochemical indices of the compound that we have isolated with those alkaloids of the heteroyohimban group enabled it to be identified as isoreserpinine [1, 2].

This is the first time that isoreserpinine has been isolated from plants of the genus *Vinca*.

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