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The genus Ammodendron Fisch. of the subfamily Papilionatae Taub., family Leguminosae is represented in the Soviet Union by six species which are considered poisonous and contain a considerable amount of alkaloids [1, 2].

Several species of Ammodendron have been studied previously: A. conollyi [3], A. argenteum [4], A. karelinii [5], A. lehmannii [6], and A. eichwaldii [7]. We give the results of a study of the alkaloids of the plant Ammodendron longiracemosum collected in July at Lake Teilikol', Kazakh SSR.

From 3 kg of air-dry leaves methanol extracted 44 g of combined bases (yield 1.46%).

When 8.8 g of this combined material was separated on a column containing 900 g of cellulose [eluent: butan-1-ol-hydrochloric acid-water (100:15:27)], ammodendrine (0.8 g, mp 71°C), anagyrine (1.1 g; anagyrine perchlorate with mp 213°C) and a mixture of the bases pachycarpine, lupanine, cytosine, and methylcytosine were isolated. From the mixture of bases on a column of silica gel (LS 100/250 μ , 1:40) chloroform and chloroform-methanol (10:1) eluted 3.4 g of pachycarpine (pachycarpine hydriodide, mp 235°C), 0.5 g of lupanine (lupanine perchlorate, mp 315°C), 0.8 g of cytosine with mp 154°C, and 1.4 g of methylcytosine with mp 137°C.

From 150 g of the seeds of the plant under investigation we isolated 4.5 g of combined bases (yield 3%). From this material, by a known method, we obtained 1.4 g of pachycarpine, 0.36 g of anagyrine, 0.18 g of lupanine, 0.04 g of methylcytosine, 2.11 g of cytosine, and 0.09 g of ammodendrine and we detected traces of the alkaloids argentine, argentamine, and rhombifoline chromatographically.

All the alkaloids isolated were shown to be identical with authentic samples by chromatography under various systems. Mixtures of them with the authentic samples gave no depressions of the melting points.

Thus, it has been established that A. longiracemosum, like other species of this genus, is rich in alkaloids. Alkaloids of three groups are present: the pachycarpine and cytosine groups and derivatives of 2,3-bipiperidyl.

LITERATURE CITED

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