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Two genus of plants from *Poaceae* family (*Melica* and *Eragrostis*) existing in "Alexandru Beldie" herbarium of I.N.C.D.S. Bucharest

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Abstract "Al. Beldie" herbarium hosted by I.N.C.D.S "Marin Drăcea", represent a landmark for botanists from the country and abroad, hosting a number of about 60,000 plants. *Melica* and *Eragrostis* are two representative genus of the herbarium from *Poaceae* family, in terms of historical and collection value, the plants being kept in original portfolios, but also being representative in scientific terms. In this context, it should be specified that for all species of these two genus existing in the herbarium, there are recorder the place and date of collection, the name of the specialist who collected the specimen and the conservation status of the specimen.
In addition to the presentation of an extract of the inventory of the two genus, which contains the data mentioned above, the present paper seeks to make known the species of the *Melica* and *Eragrostis* genus present on the herbarium, by briefly describing them morphologically and ecologically characteristics. At the same time, the paper presents the map of the specimens harvesting of the two genus in Romania and synthesizes graphically the harvesting periods between 1851 and 1975.

Key words

herbarium, plants, leaves, botanists

National Institute for Research and Development in Forestry (INCDS) Marin Drăcea from Bucharest hosts a reference herbarium for specialists from Romania and abroad, which contains in its collections no fewer than 60,000 of plant species, arranged in 30 modules, with 20 drawers each (8). In addition to the historical and collection value of the herbarium, given that they are kept on the original portfolios, must be highlighted their scientific value, amplified by details recorded for each plant, referring to the year and place of collection, but also to the name of the specialist who made the collection. Registered on INDEX HERBARIUM, the collection is composed up of multiple donated private collections and pieces from foreign collections procured through exchanges.

The herbarium is named after Alexandru Beldie, a botanist known for his work dedicated to the flora of the Bucegi Mountains (1, 2). Thus, in the herbarum colections there are numerous plants from the mountain area, many of the 32 species of the *Arabis* genus(3), or of the 112 species of the genus *Hieracium* (8). Besides these, there are also collected plants from other parts of the country or from dendrological parks such as those collected by S. Paşcovschi in the Basoş Dendrological Park close to Timişoara or abroad. Along with these, the herbarium collections also includes the *Melica* and *Eragrostis* genres, well represented in the herbarium in terms of number of species, as well as the degree of conservation, especially considering the age of the first plants collected from these genres.

Materials and Methods

The working methods used in this paper are *bibliographic research and documentation* in terms of the morphology and ecology of species from herbarium, in order to present them as accurately and in detail as possible.

The analysis and synthesis are other methods used to carry out the work, especially for the verification and the synthesis of the data presented, form drawing the map showing the place of harvesting of species in our country, for drawing the harvesting chart for the whole period of 124 years, but also for the elaboration of the results and conclusions.

The study material consisted of the 100 existent sheets from the herbarium, which belong to *Melica* and *Eragrostis* genus. They were systematized by species, after the harvest year, by the place where they were harvested and by the specialist who harvested them. An extract from the inventory of *Melica* and *Eragrostis* genus is shown in table no.1.

Table 1

Inventory of *Melica* and *Eragrostis* genus from *Alexandru Beldie* Herbarium, INCDS Bucharest (extract)

Drawer no.	Sheet no.	Herbarium/ Botanical collection/ Institute	Species name	Collection date	Collection place	Collected/ Determined by:	Conservation degree (1..4)
32	4	Herbarium of Forest Research Institute	*Melica altissima L.*	31.10.1972	Cosereni	V. Leandru	1
32	20	Herbarium Polytechnic Bucharest, Faculty of Forestry	*Melica ciliata* L.	12.06.1948	Cozia-Arges Mountain	Al. Beldie	1
32	23	Museum Botanicum Universitatis Clusiensis	*Melica flavescens*	10.06.1920	Transilvania, Hunedoara district	M. Peterfi	1
32	35	Herbarium Paul Cretzoiu Bucharest	*Melica nutans* L.	31.05.1942	Bucovina, Cernauti district, Horeca forest	P. Cretzoiu	1
32	46	ICEF	*Melica picta* C.Koch	03.06.1939	Borsec forest, Mures county	Pascovschi	1
32	62	Herbarium of Polytechnic School Bucharest, Botanical Laboratory	*Melica uniflora*	24.06.1941	Pustnicu forest, Branesti Ilfov county	C.C.Georges cu/ T.Bunea	1
39	120	Herbarium E. Mandon	*Eragrostis megastachya*	02.09.1911	Montpellier	E. Mandon	1
39	95	Museum Botanicum Universitatis Cluj	*Eragrostis minor*	18.08.1935	Basarabia, Lapusna district	A. Arvat	1
39	103	N. Balcescu Agronomical Institute Bucharest	*Eragrostis pilosa*	12.08.1955	Ulmeni, Oltenita Bucharest	C. Chirila	1

Results and Discussions

Melica genus is part of *Poales* order, *Poaceae* family, *Pooideae* subfamily. Is a genus of perennial grasses known generally as melic or melic grass. They are found in most temperate regions of the world. They are clumping grasses with long, erect stems bearing spikelets of papery grass flowers. Some species of melic have corms and are sometimes called oniongrass (10).

Species of this genus that are in the collection are presented below:

Melica altissima L. (fig. 1) is common known as **atropurpurea** or **dark purple Siberian melic**. Is a deciduous perennial grass forming a spreading clump of light green leaves, with erect stems bearing one-sided raceme-like panicles of glossy deep purple spikelets in summer. Have deciduous foliage, his habit is as tufted type and is hardy in all northern Europe (-20 to -15 C degrees). Have purple flowers in the summer, grow in full sun or partial shade, on well-drained, moist bu well drained loam, chalk, sand or clay solis with acid, alkaline or neutral pH. It can reach 1-1,5 meters height (16).

Melica ciliata L. is commonly called **hairy melic** or **silky spike melic**, is a grass species of perennial bunchgrass native to Europe, north Africa, and temperate Asia. The species is perennial and caespitose with elongated rhizomes. It have erect culms which are 50–100 centimetres long. Leaf-sheaths are

tubular and closed on one end with its ligule having an eciliate membrane. Leaf-blades are flat, stiff, and are 5–15 centimetres long by 1–3 millimetres wide. Their surface is scabrous and glabrous while it apex is attenuate. The panicle is contracted, continuous, linear and is 4–20 centimetres long. The species spikelets are cuneate and are made out of 1 fertile floret. Fertile florets are pediceled, pedicels of which are filiform and puberulous.

Both lower and upper glumes are keelless, membranous, ovate, are 4–5 millimetres long and 5-veined. It palea have ciliated keels and is 2-veined, while it fertile lemma is keelless, lanceolate, with acute apex and ciliated margins. It is also 4.5–5 millimetres long and is 7–9 veined. Flowers are fleshy, oblong, truncate, united and have 2 lodicules and 3 anthers. The species fruits is caryopsis with additional pericarp and linear hilum (10).

Melica imperfecta Trin. is a species of grass known by the common name **smallflower melic** and **little California melic**. It is native to the Arizona, California, and Nevada in the United States and Baja California in Mexico. It grows in chaparral, woodlands, montane regions, and other dry areas.

Melica imperfecta is a perennial grass growing up to 1,2 metres in maximum height, and is classified as a bunchgrass by lacking rhizomes and corms. The stem can have 5-11 dm, the leaves are with ligule of 3-6 mm and blade of 1-6 mm wide. The inflorescence is a narrow to wide and can have 5-36 cm with spikelet of 3,5-7 mm, glumes of 2-6 mm more or less equal, 1-2 fertile florets, sterile cluster of 0,5-4 mm, acute to obtuse and lemma of 3–7 mm, acute or obtuse, generally glabrous or minutely scabrous. It vegetates on dry rocky hillsides, chaparral, woodland at elevation less than 1500 m. The flowering time is in the spring, on April-May (18).

It is cultivated in the specialty horticulture trade and available as an ornamental grass for: natural landscape, native plant, drought tolerant water conserving, and habitat gardens (10).

Melica macra Nees is a species of grass in the *Poaceae* family originally from South America, from Argentina, Brazil, and Uruguay. The species is bisexual with closed leaf-sheaths and have short rhizomes with culms that are 20–100 centimetres tall. It panicle is 10–15 centimetres long and is linear. Its rachis and branches are scabrous while the ligule is 0.2–0.3 millimetres long and is membranous. The glumes are lanceolate, papery and mebranous on borders, with difference in size; lower glume is 5.5–10 millimetres long by 2.5–3.5 millimetres wide while the upper one is 6.5–10 millimetres long by 2–3 millimetres wide (10).

Melica magnolii Gren. & Godron have a stem of 20-80 cm with (2)3-5 knots and leaves with ligules of 3-6 mm, obtuse, pubescent on the back, with lamina of 7-20 x 0,1-0,6 cm twisted or flat. Panicle of (5) 9-25 cm, dense, usually lobed, sometimes interrupted by the lower internode. Short internodes, the lower one 2-4 cm, with 2-3 semiritics applied to the erect rash and with many spikelets. Spikelets of 6-8 mm, with one fertile flower. Unequal glumes, glabrous, the inferior one of (3,5-) 4-5,5 mm, ovate, apiculate; the upper 6-8 mm, lanceolate and subaristulate. It flowers and fructifies from May to June. It is found in meadows and shrubs areas, being very common in the Mediterranean area (11).

Melica nutans L. (fig. 2) known as **mountain melick**, is a grass species in the *Poaceae* family, native to European, Eurasian, and Asian forests. It has slender creeping rhizomes. The culms are 25–970 centimetres tall. It inflorescence is comprised out of 5–15 fertile spikelets, which are both oblong and compressed, with the length of 6–8 millimetres. They are comprise out of 2-3 fertile florets that are diminished at the apex. The florets are 5–7 millimetres long and are elliptic. Flowers have 3 anthers which are 1.5–2 millimetres in length. Glumes are thinner than fertile lemma with the lower one being of 4–6 millimetres which is one length of upper one (10).

It is spread from the hill to the alpine area, is a shade or semi-shade species, on rich and basic soils, mesophyla to mezoxerophila species, in deciduous forests (beech, oak, mixed forests) (6).

Fig. 1 *Melica altissmina* (*Al. Beldie* herbarium)

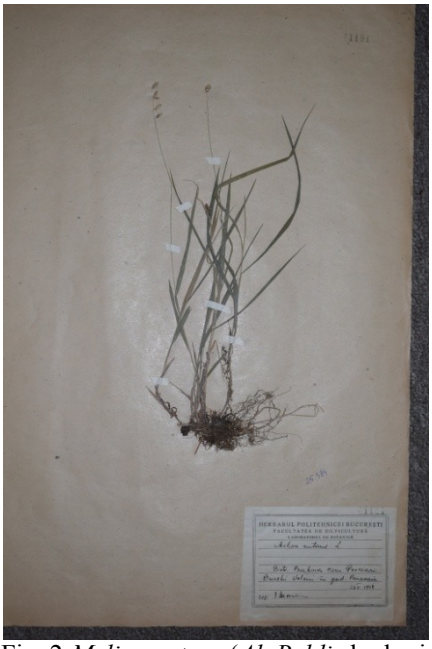

Fig. 2 *Melica nutans* (*Al. Beldie* herbarium)

Melica picta K. Koch is a species of grass in the *Poaceae* family that can be found in Europe, northwestern Africa and southwestern Asia. The species is cespitose and perennial with the culms being 40–80 centimetres long. Leaf-sheaths are closed, tibular and scabrous wsith eciliate membrane being 1–2.5 millimetres long. The leaf-blades are pilose and rough. They are also hairy and have scabrous margins and surface with acuminate apex. The length of a leaf-blade is 8–16 centimetres long and 2–5 millimetres wide. Their panicle is linear, open, secund and is 6–12 centimetres in length. They can either be 6–10 millimetres long or 7–8 millimetres. Branches have fertile spikelets which are pediceled and are solitary as well.

Spikelets are 8–10 millimetres in length and are oblong. They also have fertile florets which are diminished at the apex. Both lower and upper glumes are elliptic, are 7 millimetres long, and either gray or red in colour. Both are also keelless and 5-veined with obtuse qpex. Lemma is chartaceous, elliptic, and is 3–3.5 millimetres long. It is also shiny and keelless but have 3 veines. The lemmas apex is obtuse just like glumes, with palea being 2-veined, lanceolated, and 5–5.5 millimetres in length. Flowers are fleshy, oblong, truncate and grow side by side, with 3 anthers. Fruits are caryopsis, have adherent pericarp and are 2 millimetres long.

Melica picta is rare in hardwood and fir forests and is also uncommon on clay and loamy soils. Flowers bloom from May to June (10).

Melica uniflora Retz. Is commonly known as **wood melick** and it is native to much of Europe, and to parts of South West Asia and North Africa. Swedish naturalist Anders Jahan Retzius described the wood melick in 1779. The species can be found in such Asian countries as Iran and Turkey and in European ones such as Balearic Islands, Faroe Islands, Finland, Iceland, Moldova, Portugal, Spain, and Sweden. Also it was recorded in Algeria, Morocco and Tunisia.

The species rhizomes are elongated. The culms are 20–60 centimetres long with leaf-blades being of 5–20 centimetres in length and 3–7 millimetres wide. The leaf-blade bottom is pubescent, rough and scaberulous. It has an open panicle which is both effuse and elliptic and is 6–22 centimetres long and 1–12 centimetres wide. The main branches have 1–6 fertile spikelets which are located on lower branches which are also scaberulous. Spikelets do ascend and have pedicelled fertile spikelets. Pedicels are 2–5 millimetres long and are straight. The fertile floret lemma is both chartaceous and elliptic and is 5–7 millimetres long. Lower glumes are oblong and are 3–6 millimetres in length. Flowers have 3 anthers which are 1.5–2.3 millimetres long with the fruits being 3.5 millimetres long. The fruits are also ellipsoid and have an additional pericarp with linear hilum.

The species is growing on plains and on elevation of 950 metres in the Black Forest and on elevation of 1.200 metres in Alps. It can be found in hardwood forests near *Fagus* species. It is also grows in dry and moist woodlands, which can either be acidic or neutral. Sandy or rocky soils are also common for such plants, but they need to be deep and loany as well. It grows on loamy soils in the north, while prefers decalcified soils in the south. The species is identical to *Fagatalia* which can be found in the Fagetum lowlands and also in the Carpinion. It is rarely occurs in the Quercion clusters. Flowers bloom from May to July. Mostly ants feed on the species caryopsis.

In the 19th century it was engraved on the illustration by Jacob Sturm in the book *Deutschlands*

Flora in Abbildungen nach der Natur mit Beschreibungen which was published in Nuremberg in 1862 (10).

Along with the species of the genus Melica presented above, it should be recalled that in the herbarium there are also specimens of the *Melica flavescens* (Schur) Simonk species.

Eragrostis genus is part of *Poales* order, *Poaceae* family, *Chloridoideae* subfamily, *Eragrostideae* tribe. Is a large and widespread genus of plants in the grass family, found in many countries on all inhabited continents and many islands. *Eragrostis* is commonly known as lovegrass or canegrass. The name of the genus is derived from the Greek words ἔρως (*eros*), meaning "love", and ἄγρωστις (*agrostis*), meaning "grass" (10).

Lovegrass is commonly used as livestock fodder. The seeds appear to be of high nutritional value for some animals, but they are also very tiny and collecting them for human food is cumbersome and hence uncommon. A notable exception is teff (*E. tef*), which is used to make traditional breads on the Horn of Africa, such as Ethiopian *injera* and Somalian *laxoox*. It is a crop of commercial importance. *E. clelandii* and *E. tremula* are recorded as famine foods in Australia and Chad, respectively (10).

Other species, such as *E. amabilis*, are used as ornamental plants. *E. cynosuroides* is used in the *pūjā* rites in the Hindu temple at Karighatta. Bahia lovegrass (*E. bahiensis*) is known as a hyperaccumulator of caesium-137 and can be grown to remove the highly toxic radioactive atoms from the environment. Weeping lovegrass (*E. curvula*) has been planted extensively to prevent soil erosion (10).

Seed dispersal is often done by passing animals; the grains' hooks latch on to fur or hair, or to clothes. Others are wind or gravity dispersed. Several herbivores feed on lovegrass, including invertebrates such as the caterpillars of the Zabulon skipper (*Poanes zabulon*) and vertebrates. The extinct bluebuck (*Hippotragus leucophaeus*) was known to graze these grasses. The dense bunches also provide cover for small animals such as the rare Botteri's sparrow (*Aimophila botterii*). Lovegrasses may be important groundcover on oceanic islands like Laysan, where other plants are rare (10).

In the following, there are presented species of this genus that are found in the collections of the *Alexandru Beldie* herbarium from I.N.C.D.S. "Marin Drăcea":

Eragrostis ciliaris (L.) R.Br. is a loosely clump-forming, annual to short-lived perennial grass, with erect or ascending, usually unbranched culms up to 60cm tall. The plant is harvested from the wild for local use as a food, medicine and source of materials. This species can be found on tropical and subtropical regions of Africa, through the Indian Ocean and Arabia to E. Asia in Pakistan, Sri Lanka, Myanmar, Vietnam, Philippines.

The habitat of this species is represented by grassland on river banks and swamp margins, and on coastal and lake-shore dunes, in sandy soils; also a common weed of disturbed ground, old cultivation and roadsides; at elevations from sea-level to over 1.400 meters (17).

Eragrostis frankii Steud., commonly called Sandbar lovegrass is found on sandy river banks, as well as roadsides and disturbed soils. Some populations are probably the result of unintentional introduction, but the species is native to New England. In Massachusetts, E. frankii only occurs on the Housatonic and Connecticut Rivers, and it is listed as a species of Special Concern. This lovegrass can be told apart from all other Eragrostis species by the combination of its upright growth form, its widely spreading inflorescences that are sometimes half the height of the plant, the tiny spikelets of only 3 to 5 florets, and the second glumes, which are equal in length to the lowest lemma (12).

His flowers are open but fairly compact, branching cluster, taller than wide, up to 7½ inches tall and 3½ inches wide, oblong-elliptic in outline and widest in the middle, with spreading to ascending branches. Spikelets (flower clusters) are light green, very small, 1 to 1.5 mm wide, variable in length with 2 to 5 (9) florets, typically only 2 or 3. At the base of a spikelet is a pair of bracts (glumes) that are light green becoming translucent, lance-like with a pointed tip, 1-veined, keeled on the back, the lower glume 1 to 1.5 mm long, the upper glume up to 1.8 mm long. Surrounding a floret are a pair of bracts (lemma and palea), light green becoming translucent, the lemmas as long as the upper glume or nearly so, more broadly oval lance shaped, folded along the keel, 3-veined. Keels have minute, stiff, rough hairs (scabrous) especially toward the tip, and lack glands.

Leaves are alternate, flat, 1½ to 5½ inches long, 1/8 to ¼ inch wide, surfaces mostly hairless, lower surface smooth, upper surface rough. Sheaths are typically longer than the internodes, mostly smooth with few hairs around upper opening. The ligule (membrane where the leaf joins the sheath) is a fringe of white hairs. Nodes are smooth, often with glandular pits below the node but may be hidden by the sheaths. Stems are smooth, multiple from the base, repeatedly branching near the base, often prostrate at the base and sharply angled from the lower node (genticulate) and erect to ascending above.

Spikelets mature quickly, the mature grains (seeds) falling away individually along with the lemma, leaving the paleas and glumes behind persisting on the stalk. The grain is a rich translucent golden brown with a textured surface, more or less spherical to slightly oblong, about .5mm in diameter (15).

Eragrostis minor Host. (fig. 3) is commonlly konwn as little lovegrass is a summer annual about ½-1½' tall, forming a small tuft of leafy culms. These

culms are erect to widely spreading and unbranched; they are light green to reddish green, terete, slender, and glabrous. There are 2-4 alternate leaves along the length of each culm; their blades are ascending to widely spreading. The leaf blades are 2-4" long and 3-5 mm. across; they are light green or grayish green, flat, and largely glabrous. The base of each blade is wider than the culm. At regular intervals along the margins of each blade, there are minute glandular droplets (may require 10x hand lens to see). The leaf sheaths are light green to dull purple and longitudinally veined; each sheath is slightly hairy above and glabrous below. At the junction of each sheath and blade, there is a conspicuous tuft of fine white hairs.

Each culm terminates in a somewhat airy panicle of spikelets that is 1½-4" long and about one-half as much across; in outline, each panicle is narrowly pyramidal to ovoid. The central axis and lateral branches of each panicle are light green, slender, and glabrous. The lateral branches are widely spreading to ascending, dividing into short lateral branchlets that are divergent. At the tips of these branchlets, there are elongated spikelets about 4-10 mm. long and 1.5-2 mm. across. Immature spikelets are light grayish green to dark purple, while mature spikelets become light tan. Individual spikelets are narrowly oblongoid and flattened in shape, consisting of 5-18 florets and their overlapping lemmas (scales with florets) that are arranged in 2 columnar ranks. Each spikelet is slightly less wide at the top than the bottom. At the bottom of each spikelet, there is a pair of glumes (scales without florets). Individual glumes are about 1.5 mm. long, lanceolate in shape, glabrous, and folded along their keels; one glume is slightly longer than the other. Located above the glumes, the individual lemmas are 1.5-2.0 mm. in length. The lemmas are lanceolate-ovate in shape, glabrous, 3-veined, and folded along their keels. Hidden behind each lemma, there is a single floret and a membranous palea. The anthers of each floret are about 0.2 mm long.

The blooming period occurs from mid-summer to early fall. The florets are cross-pollinated by the wind. Fertile florets are replaced by tiny ovoid grains (up to 1 mm. long); the latter are small enough to be blown about by the wind. The shallow root system is fibrous. At favorable sites, this grass often forms colonies by reseeding itself.

The preference of this species is full sun, mesic to dry conditions, and barren soil containing gravel or sand. Most growth and development occurs during the summer.

Eragrostis minor, prefer as habitats, fields, sandy or gravelly areas along railroads, roadsides, cracks in urban sidewalks, areas along paths, and barren waste areas. Open areas with a history of disturbance and scant ground vegetation are preferred (13).

Eragrostis papposa (Roem. & Schult.) Steud.iIs a tufted perennial, often short-lived; culms 10.40 cm high, erect or ascending. Leaf-blades flat or inrolled, 2-15 cm long, 1-3 mm wide, stiff, glaucous, often forming a compact cushion. Panicle ovate, 3-20 cm long, open, with or without glands on the slender pedicels. Spikelets 5-18-flowered, linear, 3.5-11 mm long, 1 mm wide, grey-green to purplish green, breaking up from the base, the rhachilla persistent; glumes unequal, the lower a lanceolate hyaline scale 0.3-1 mm long, the upper ovate and 0.8-1.3 mm long; lemmas broadly elliptic to rotund, 1.1-1.7 mm long, appressed to the rhachilla, obtuse; palea minutely scaberulous on the keels, persistent; anthers 3, 0.1-0.2 mm long. Caryopsis oblong-ellipsoid, 0.6-1.2 mm long. Is a very distinctive species with a very delicate panicle, branches and glumes tinged with purple, leaden-grey lemmas and stiff glaucous leaves conspicuously bearded at the mouth of the sheath. Nothing seems to be known of its economic uses (9).

Eragrostis pilosa (L.) P.Beauv (fig. 4) is a species of grass. It is native to Eurasia and Africa. It may or may not be native to North America. It is widely introduced, and it is a common weed in many areas. Common names include Indian lovegrass, Jersey love-grass, hairy love grass, small tufted lovegrass, soft lovegrass (English), *éragrostide poilue*, *pâturin poilu* (French), *barba de indio*, *pasto ilusión*, *pasto pelillo*, *sereno* (Spanish), *hua mei cao* (Chinese), *behaartes Liebesgras* (German), *capim-barbicha-de-alemão*, *panasco* (Brazilian Portuguese), and *gangami subu* (Zarma).

This species is an annual grass growing up to 70 centimeters tall. The narrow leaves are up to 20 centimeters long. Both stem and foliage usually have scattered glandular pits; when the species is divided into varieties, the abundance of the pits helps to distinguish them. The ligule is a short fringe of hairs. The inflorescence is an open panicle with branches each up to 10 centimeters long. The lowest branches are whorled about the stem. The narrow, grayish to purple-green spikelets are up to a centimeter long and each can contain up to 10 to 17 florets.

In terms of habitat and dispersal, this grass can be found in a variety of habitat types, easily taking hold in disturbed areas such as roadsides and crop fields. It grows well in moist and wet habitat, including swamps. It is spread by seed, which is transported by water and wind, in soil and hay, and on machinery and trains. It likely has a long-lasting soil seed bank (10).

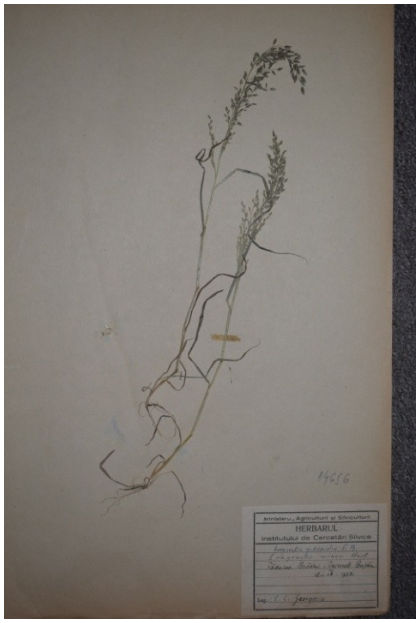

Fig. 3 *Eragrostis minor* (*Al. Beldie* herbarium)

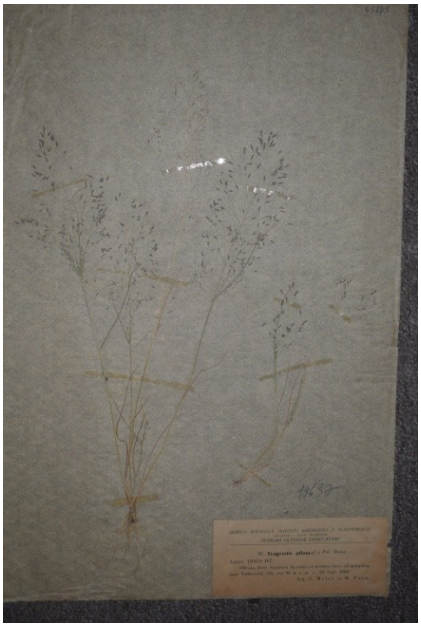

Fig. 4 *Eragrostis pilosa* (*Al. Beldie* herbarium)

Eragrostis pusilla Scribn. ex Beal is a annual plant, with culms erect, or geniculately ascending of 10–42 cm long. Ligule an eciliate membrane, leaf-blades 5–15 cm long and 2–3 mm wide. Inflorescence is a open panicle, elliptic of 8–15 cm long. Primary panicle branches are spreading, spikelets are solitary and the fertile spikelets are pedicelled comprising 2–4 fertile florets with diminished florets at the apex. Spikelets oblong, laterally compressed, 1–1.5 mm long, breaking up at maturity; rhachilla deciduous, disarticulating below each fertile floret. Glumes deciduous, similar, shorter than spikelet. Lower glume ovate of 0.2–0.3 mm long, 0.75 length of upper glume, membranous, 1-keeled, 1 -veined. Lower glume lateral veins absent. Lower glume apex is obtuse. Upper glume is ovate of 0.4 mm long, 0.75 length of adjacent fertile lemma, membranous, 1-keeled, 1 -veined. Upper glume lateral veins absent. Upper glume apex is obtuse. Fertile lemma are oblong of 0.5–0.6 mm long, membranous, keeled, 3 -veined. Lemma lateral veins ribbed. Lemma apex is obtuse. Palea keels are eciliate. Apical sterile florets resembling fertile though underdeveloped. The flowers have 2 lodicules, cuneate, fleshy, 2 anthers of 0.3–0.4 mm long. The fruits are caryopsis with adherent pericarp, obovoid. Embryo is about 0.4 length of caryopsis (14).

Eragrostis suaveolens A.K. Becker ex Claus with scientific name epithet (*suaveolens*) meanning „sweet-scented", is a annual plant, with culms slender, caespitose, decumbent at base, smooth and glabrous, having 20–60 cm tall. Leaf sheaths are glabrous, along veins with many glands, pilose along summit; ligules a ring of hairs; blades linear, flat, glabrous, with many glands. Panicle lax; branches slender, solitary or 2(–3) per node, glabrous in axils. Spikelet rather pale, 4–11 × 1.5–2(–2.5) mm, (5–)10–20-flowered. Glumes are slightly shorter than florets, lower glume shorter than upper glume. Lemmas are broadly ovate, eglandular along keel, lower lemma 1.5–2 mm. Palea slightly shorter than its lemma, curved, along keels ciliate, persistent. It have 3 stamens, anthers of 0.2–0.3 mm. Plant is flowering and fruiting on the period June–September. E. suaveolens can be found on roadsides, streams, fields on Xinjiang (China), Kazakhstan and Eastern Europe.

Along with the species of the Eragrostis genus presented above, there are also specimens of ***Eragrostis maxima*** Baker, **E*ragrostis megastachya, Eragrostis reptans*** (Michx.) Nees, ***Eragrostis verticillata*** (Cav.) P. Beauv.

Collection place. Most of *Melica* species are harvested in Romania (Bucegi, Runcu, Hunedoara, Cluj, Dobrogea, Hanu Conachi, Mociarul de Sus forest, Gurghiu, Sadova forest, Bacău, Casa Verde forest, Timișoara, Băneasa forest, Căscioarele Ilfov, Borsec, Anina, Nera valley, Vidra, Sighișoara, Brănești), while species of *Eragrostis* are harvested both in the country (Valea Călugărească, Cernica forest, Pogoanele Buzău, Vlașca, Vișeu, Segarcea, Cluj, București), and abroad (Ohio, Montpellier, Spania).

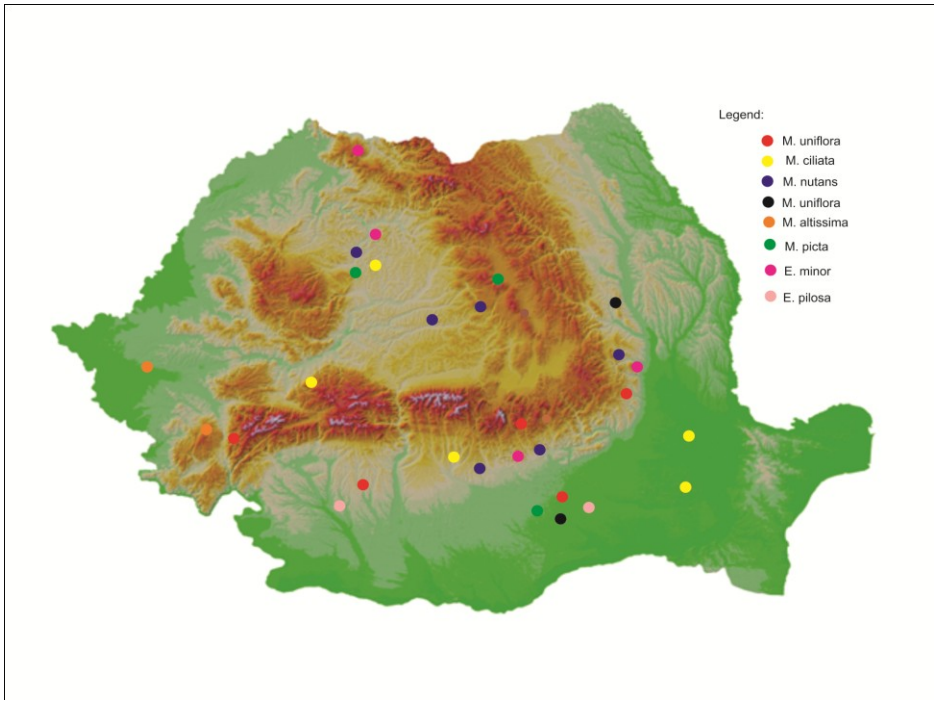

Fig. 5 Collection place for plants from *Melica* si *Eragrostis* genus in Romania

Collection year of plants. The plants were harvested over a period of time between the years 1851 and 1975. The oldest plants of this genus are those of *Melica nutans*, collected on 1851and *Melica macra*, collected on 1870. The periods when most plants were harvested were 1930-1939 and 1940-1949 (figure 6).

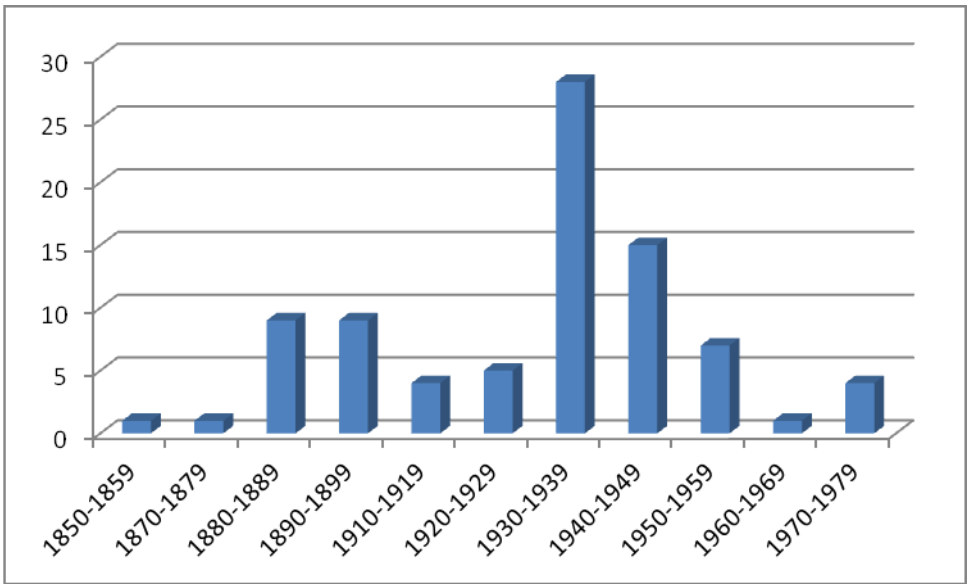

Fig. 6 Collecting periods of *Melica* and *Eragrostis* plants from *Al. Beldie* Herbarium, INCDS Bucharest

The people who collected the plants are represented by Romanian (M. Badea, Al. Beldie, T. Bunea, C. Chirilă, M. Ciucă, V. Ciocîrlan, A. Coman, P. Cretzoiu, C.C. Georgescu, M. Haret, N.Al. Iacobescu, V. Leandru, C. Papp, M. Peterfi, E. Petrini, I. Prodan, S. Paşcovschi) or foreign specialists (C.Bicknell, E. Mandon, Becker, Harison, Dr. Hiervnymus, Sagorski, Wolff).

Conclusions

Important genres in the Al. Beldie herbarium from INCDS Bucharest, *Melica* and *Eragrostis*, are represented in the herbarium by a number of 9 and respectivelly 11 species contained in 100 sheets.

The species of the *Melica* and *Eragrostis* genres, existing in the collections of Alexandru Beldie herbarium, were collected over a period of 124 years,

between 1851 and 1975. Thus, the earliest specimens of these genres existing in the herbarium portfolios are over than 160 years old.

Analyzing the harvesting periods of plants from these genres, it can be seen that a maximum in terms of the number of plants harvested was recorded in the period 1880-1900. Compared with the beginning period, the number of plants collected remained still sustained in the following period, including during the First World War. However, most of the plants, were collected between 1930-1949.

Most specimens of the genus *Melica* were harvested from mountainous, hilly or plain areas in the northern, central, southwestern, southern and southeastern parts of the country. *Eragrostis* exemplars from herbarium were collected both from the country and abroad from the European continent (Montpellier-France, Spain) or North America (Ohio). The specimens of both genres were collected by Romanian and foreign specialists.

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