

# *Canastra* Morrone, Zuloaga, Davidse & Filg.

Carolina Delfini

Instituto de Botânica Darwinion; cdelfini@gmail.com

Fernando Omar Zuloaga

Instituto de Botânica Darwinion; fzuloaga@darwin.edu.ar

---

This treatment is composed of the following taxa: *Canastra*, *Canastra aristella*, *Canastra lanceolata*.

## HOW TO CITE

Delfini, C., Zuloaga, F.O. 2020. *Canastra* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB13071>.

## DESCRIPTION

Cespitose or shortly rhizomatous perennials. Ligules membranous-ciliate. Leaves linear or linear-lanceolate, flat or with involute margins. Inflorescences multiflowered, terminal or axillary, lax and open to contracted, pyramidal to oblong. Spikelets long ellipsoid or lanceolate, dorsiventrally compressed, scabrous. Lower glume and upper glume awned, the lower glume 1-nerved. Lower lemma 3-5-nerved, glabrous or with the midnerve scabrous. Lower palea lanceolate 2-nerved, glabrous. Upper antheridium cartilaginous. Caryopsis long ellipsoid, hilum punctate or oblong, embryo 1/3-1/2 as long as the caryopsis. Anatomic structure C<sub>3</sub>.

## Life Form

Herb

## Substrate

Terrestrial

## DISTRIBUTION

Native, Is endemic from Brazil

## Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

## Vegetation Types

High Altitude Grassland, Grassland, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

## Geographic Distribution

### Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Rio Grande do Sul, Santa Catarina)

## IDENTIFICATION KEY

### Key to the species of *Canastra* Morrone, Zuloaga, Davidse & Filg.:

1. Plants 1-2 m tall; blades 45-75 x 1-1.8 cm, keeled; axillary inflorescences absent ..... *C. aristella*

1. Plants 50-60 cm tall; blades 15-30 x 0.4-0.7 cm, flat; axillary inflorescens present ..... *C. lanceolata*

## REFERENCE

- Morrone O., Zuloaga F.O., Davidse G., & Filgueiras T.S.** 2001. *Canastra*, a new genus of Paniceae (Poaceae, Panicoideae) segregated from *Arthropogon*. *Novon* 11(4): 429–436.
- Zuloaga F.O., Morrone O., Davidse G., Filgueiras T.S., Peterson P.M., Soreng R.J., & Judziewicz E.J.** 2003. Catalogue of New World grasses (Poaceae): III. Subfamilies Panicoideae, Aristidoideae, Arundinoideae, and Danthonioideae. *Contr. U.S. Natl. Herb.* 46: 01–662.
- Zuloaga F.O., Giussani L.M. & Morrone O.** 2006. On the taxonomic position of *Panicum aristellum* (Poaceae: Panicoideae: Paniceae). *Syst. Bot.* 31(3): 497–505.

# *Canastra aristella* (Döll) Zuloaga & Morrone

## Has as synonym

basionym *Panicum aristellum* Döll

## DESCRIPTION

**Leaf: length of the blade foliar** 45 - 75 cm; **blade foliar** linear - lanceolate. **Inflorescence: spikelet** oval-lanceolate; **indumentum of the spikelet** scabrous on the veins; **inflorescence axillary** absent.

## ADDITIONAL DESCRIPTION

Cespitose or shortly rhizomatous perennials. Culms erect, 1-2 m tall, many-noded, simple, cylindrical, glabrous to hirsute; internodes solid or with a small lumen, 15-40 cm long; nodes compressed, glabrous. Sheaths shorter than the internodes, solid or with a small lumen, 10-30 cm long, keeled, rigid, overlapping at the base, glabrous or papillose-pilose along the margins. Ligules membranous-ciliate, 0.5-0.7 mm long; collar inconspicuous. Blades linear-lanceolate, 45-75 cm long, 1-1.8 cm wide, acuminate, narrow and involute toward the base, becoming flattened and wider, sometimes with the margins involute, rigid, pubescent toward the base on the adaxial surface, otherwise glabrous, the margins scabrous, midnerve prominent. Inflorescences 20-40 cm long, 7-20 cm wide, multiflowered, lax and open to contracted, pyramidal to oblong, the branches diverging from the axis with the spikelets congested along the secondary branches; main axis cylindrical, scabrous, the branches alternate, triquetrous, markedly scabrous, densely to sparsely hirsute, pulvini glabrous to pubescent; pedicels short, scabrous or occasionally hirsute. Spikelets 3.8-5.7 mm long, 0.7-1 mm wide, 3.1-3.9 mm long without the awns, lanceolate, brown, the glumes and lower lemma herbaceous, prominently scabrous on the nerves. Lower glume 2.3-3.6 mm long, ovate-lanceolate, the awn 0.9-1.8 mm long, about as long as the lower lemma, 1-3 nerved, the midnerve and awn, as well as the margins, markedly scabrous, the inner surface scabrous toward the apex. Upper glume 3.7-5.7 mm long, markedly scabrous at the apex on the inner surface, 5-nerved, the nerves scabrous, the central nerve extending into an awn 0.7-2 mm long, this twisted or not. Lower lemma oblong, acute, 3.8-3.6 mm long, awnless, 3-5 nerved, the midnerve scabrous. Lower palea lanceolate, 2.3-3.1 mm long, 0.5-0.7 mm wide, hyaline glabrous, with scabrous, denticulate margins; male flower present, stamens 3. Upper antheridium 2.3-3.1 mm long, long-ellipsoid, membranous, smooth, pale to brown, with prominent hooks toward the apex of the lemma and palea and on the margins of the lemma, also with silica cells, bicellular microhairs and stomata at the apex of both lemma and palea; lemma 5-nerved; lodicules 2, conduplicate; stamens 3, stigmas 2 with the styles united at the base. Caryopsis long-ellipsoid, 1.6 mm long, 0.6 mm wide, dark brown; hilum oblong, embryo 1/3 the length of the caryopsis.

## COMMENTS

Distribution and habitats: Known from the states of Rio de Janeiro, Paraná, Minas Gerais, Santa Catarina, Rio Grande do Sul, and São Paulo, Brazil, where it is found at margins of rivers and streams, on seasonally inundated soils, between sea level and 1300 meters (Morrone *et al.* 2001).

## Life Form

Herb

## Substrate

Terrestrial

## DISTRIBUTION

Native, Is endemic from Brazil

## Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

**Vegetation Types**


High Altitude Grassland, Grassland

**Geographic Distribution**Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Rio Grande do Sul, Santa Catarina)

**HERBARIUM MATERIAL**

J.F. Widgren, 924, K,  (K000309195), Minas Gerais, **Typus**

J.F. Widgren, 924, P (P00740833), Minas Gerais, **Typus**

J.P. Souza, 849, SPF, 122058,  (SPF00122058), São Paulo

**REFERENCE**

**Morrone O., Zuloaga F.O., Davidse G., & Filgueiras T.S.** 2001. *Canastra*, a new genus of Paniceae (Poaceae, Panicoideae) segregated from *Arthropogon*. *Novon* 11(4): 429–436.

**Zuloaga F.O., Morrone O., Davidse G., Filgueiras T.S., Peterson P.M., Soreng R.J., & Judziewicz E.J.** 2003. Catalogue of New World grasses (Poaceae): III. Subfamilies Panicoideae, Aristidoideae, Arundinoideae, and Danthonioideae. *Contr. U.S. Natl. Herb.* 46: 01–662.

**Zuloaga F.O., Giussani L.M. & Morrone O.** 2006. On the taxonomic position of *Panicum aristellum* (Poaceae: Panicoideae: Paniceae). *Syst. Bot.* 31(3): 497–505.

# *Canastra lanceolata* (Filg.) Morrone, Zuloaga, Davidse & Filg.

## DESCRIPTION

**Leaf: length of the blade foliar** 15 - 30 cm; **blade foliar** linear. **Inflorescence: spikelet** ellipsoid; **indumentum of the spikelet** scabrous with some hair sparse; **inflorescence axillary** present.

## ADDITIONAL DESCRIPTION

Plants perennial, caespitose. Culms 50-60 cm tall, simple or branched at the basal nodes, erect; internodes compressed, striate, glabrous; nodes glabrous. Sheaths overlapping, longer than the internodes, laterally compressed, keeled on the back, ciliate, with papillose-pilose hairs on the lower portion of the membranous margins, otherwise glabrous; lower sheaths usually laciniate. Ligules 1.4-1.6 mm long, membranous-ciliate, the membranous portion ca. 0.2 mm long, the hairs 0.9-1.3 mm long, whitish; collar glabrous. Leaves linear, 15-30 x 0.4-0.7 cm, involute, rigid, narrowed at the base, the apex subulate, densely papillose-pilose on the basal portion near the ligule, glabrous on the rest of the surface, the margin involute, papillose-pilose towards the base. Inflorescences terminal or axillary, borne from the uppermost nodes, many-flowered; peduncle up to 25 cm long, glabrous. Terminal panicle congested, exserted, 10-22 x 2-5 cm; main axis angular, scaberulous to smooth, glabrous; pulvini long-pilose; primary branches alternate to subopposite, the lower ones 4-5 cm long, divergent from the axis; secondary and tertiary branches adpressed, axis of the branches triquetrous, scabrous; pedicels triquetrous, scabrous; axillary panicles partially exserted, 8-10 x 1-2 cm. Spikelets long ellipsoid, 3-3.2 mm long, exclusive of awns, 0.8 mm wide, dorsiventrally compressed, 2-flowered, scabrous, greenish and tinged with purple. Lower glume awned, 0.4-1.2 mm long without the awn, 1-nerved, scabrous, the awn up to 1.7 cm long, scabrous with antrorse hairs, flexuous, purplish. Upper glume as long as the spikelet, awned, herbaceous, 5-nerved, the nerves prominent and scabrous, the awn up to 1.5 cm long, scabrous with antrorse hairs, purplish. Lower lemma 2.7-3 mm long, 3-nerved, acute, glabrous. Lower palea lanceolate, 2-2.2 x 0.5 mm, hyaline, 2-nerved, glabrous, the margins smooth to scaberulous. Lower flower staminate, stamens 3, purplish; anthers 1-1.8 mm long. Upper antheridium long-ellipsoid, acute, cartilaginous, 2.4-2.7 x 0.4 mm, glabrous. Upper lemma not enclosing the apex of the palea, 3-nerved, the nerves not prominent. Upper palea 2-nerved, glabrous. Upper flower bisexual; lodicules 2, ca. 0.2 mm long, hyaline, conduplicate; stamens 3; anthers 1.4-1.6 mm long; styles 2, free from the base; stigmas plumose, purple. Caryopsis long ellipsoid, 1.2 x 0.3 mm, plano-convex; hilum punctate, basal; embryo 1/3-1/2 as long as the caryopsis.

## COMMENTS

Distribution: Endemic to Minas Gerais (Brazil) (Morrone *et al.* 2001).

### Life Form

Herb

### Substrate

Terrestrial

## DISTRIBUTION

Native, Is endemic from Brazil

### Phytogeographic Domains

Central Brazilian Savanna

### Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

### Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

### HERBARIUM MATERIAL

L. Emygdio de Mello Filho, 2308, MO, 05102622 (MO190697), Minas Gerais, **Typus**

T.S. Filgueiras, 3588, CEN, 41352 (CEN00041352), Minas Gerais

T.S. Filgueiras, 3588, K,  (K000847985), Minas Gerais

### REFERENCE

**Morrone O., Zuloaga F.O., Davidse G., & Filgueiras T.S.** 2001. *Canastra*, a new genus of Paniceae (Poaceae, Panicoideae) segregated from *Arthropogon*. *Novon* 11(4): 429–436.

**Zuloaga F.O., Morrone O., Davidse G., Filgueiras T.S., Peterson P.M., Soreng R.J., & Judziewicz E.J.** 2003. Catalogue of New World grasses (Poaceae): III. Subfamilies Panicoideae, Aristidoideae, Arundinoideae, and Danthonioideae. *Contr. U.S. Natl. Herb.* 46: 01–662.

**Zuloaga F.O., Giussani L.M. & Morrone O.** 2006. On the taxonomic position of *Panicum aristellum* (Poaceae: Panicoideae: Paniceae). *Syst. Bot.* 31(3): 497–505.