US00PP35042P2

(12) **United States Plant Patent**
Takahashi et al.

(10) **Patent No.: US PP35,042 P2**
(45) **Date of Patent: Mar. 14, 2023**

(54) ***GENTIANA* PLANT NAMED 'ASHIRO 29-2065'**

(50) Latin Name: ***Gentiana* L. hybrid**
Varietal Denomination: **'Ashiro 29-2065'**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **17/556,645**

(22) Filed: **Dec. 20, 2021**

(51) **Int. Cl.**
A01H 5/02 (2018.01)
A01H 6/40 (2018.01)

(52) **U.S. Cl.**
USPC **Plt./433**
CPC ***A01H 6/40*** (2018.05)

(58) **Field of Classification Search**
USPC Plt./433
CPC A01H 5/02
See application file for complete search history.

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(57) **ABSTRACT**

A new variety of *Gentiana* L. plant (Japanese gentian) which has a narrow lanceolate leaf shape and a stem length of 71.0 cm on average.

4 Drawing Sheets

Common name: Japanese gentian.
Botanical classification: *Gentiana* L. hybrid.
Variety denomination: 'Ashiro 29-2065'.

BACKGROUND OF THE NEW VARIETY

The present invention relates to a new and distinct variety of Japanese gentian, *Gentiana* L., which has been given the variety denomination 'Ashiro 29-2065'.

This new gentian has a narrow lanceolate leaf shape and a stem length of 71.0 cm on average. It is adapted for use as cut flowers or pot flowers.

ORIGIN OF THE VARIETY

The variety resulted from a multiple-step cross-breeding program starting from a group of unpatented varieties. The ancestor varieties were unpatented strains owned by the applicant, having the company-internal names: '17INP' which belongs to the species *Gentiana triflora*, and '25-322-R1', '26-904', '12-320-1', '14-526-2', '11-24-1', '11-192-1', '13SH', '10-76', '6-62', '12-186-1', '12-212-1', '25-817', '17SUP', and '8-130SP6A1', which belong to the species *Gentiana scabra*. Group crosses and/or self-crosses with a single individual were performed. The program had seven steps, as shown in the map of FIG. **6**, which also indicates the company-internal names of the intermediary, unpatented strains. At each step, the individuals with good plant and flower shape were selected. The corresponding species identification is (((*scabra*x(*scabra*x*triflora*))x*scabra*)))x((*scabra*x*triflora*)x*scabra*)).

With respect to the direct parents '28-2012Co-3b' and '27-836-53', the instant variety 'Ashiro 29-2065' has a triploid and double-flowered flower type, whereas '28-2012Co-3b' has tetraploid and double-flowered flower type, and '27-836-53' has diploid and single-flowered flower type.

The multiple-step cross-breeding program was performed over multiple growing seasons up to 2018; in October 2018,

selection of the variety was performed. We asexually reproduced the variety by vegetative reproduction through cuttings, tissue culturing via lateral bud culture, and in October 2020, the new variety was found to be stable and asexually reproduced true to type in successive generations.

The variety was developed and propagated in Iwate, Japan.

The variety can be propagated by cutting (optimal timing is mid-February) and/or tissue culturing via lateral bud culture.

Cultivation of the variety does not require particular conditions. Maintenance and storage method of the plant material can be by tissue culture via lateral bud culture.

The variety is adapted for use as cut flowers or pot flowers.

SUMMARY OF THE VARIETY

The variety is distinguished by its lanceolate leaf shape and by its stem length of 71.0 cm on average, as compared to 'Lovely Ashiro' variety whose leaf shape is broad lanceolate and whose stem length is 110.1 cm on average. 'Lovely Ashiro' is unpatented.

A comparison with Lovely Ashiro variety is presented as follows in Table 1:

TABLE 1

	'Lovely Ashiro'	'Ashiro 29-2065'
Leaf shape	Broad lanceolate	narrow lanceolate
Stem length	110.1 cm	71.0 cm

Additional distinguishing characteristics of the 'Ashiro 29-2065' plant are the five-six (5.4 on average) lobes of the corolla, and the light reddish purple color (N75A on The RHS Colour Chart), with spots, of the secondary lobes with acute apex in-between the main lobes of the corolla.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings, which are as nearly true as is reasonable possible to make in a color illustration of this type:

FIG. **1** is a color photograph showing the 'Ashiro 29-2065' plant as grown in a culturing bed;

FIG. **2** is a color photograph showing flowers of the 'Ashiro 29-2065' plant;

FIG. **3** is a color photograph showing flowering stages of flowers of the 'Ashiro 29-2065' plant;

FIG. **4** is a color photograph showing petals of flowers of the 'Ashiro 29-2065' plant;

FIG. **5** is another color photograph showing flowers of the 'Ashiro 29-2065' plant;

FIG. **6** is a map showing the steps of the cross-breeding program from which the variety was obtained.

Due to chemical and/or digital development, processing and printing, the plants or portions of plants depicted in the photographs may or may not be precisely accurate, when compared to the actual botanical specimens.

DETAILED DESCRIPTION OF THE INVENTION

The plants in the botanical description below and shown in the Figures were grown in Iwate, Japan. The plants were collected in October 2020 at age 16 months.

Colors are given according to The 2015 R.H.S. Colour Chart.

BOTANICAL DESCRIPTION

TABLE 2

Stem	Length:	71.0 cm
	Thickness (main flowering stem):	5.1 mm
	Number of flowering stems per plant (average):	10.2
	Texture:	smooth
	Color:	strong yellow green (145A on RHS Colour Chart)
	Anthocyanin coloration at two thirds from base:	present, dark red (187A on RHS Colour Chart)
	Number of internodes longer than 5 mm (average):	21.0
	Length of internode in central third:	4.1 cm
	Side shoots:	present
	Number of side shoots with only one node (average):	5.7
	Number of side shoots with more than one node (average):	14.7
	Length of side shoots (average):	40.5 cm
	Diameter of side shoots (average):	2.7 mm
	Texture of side shoots:	smooth
	Color of side shoots:	light yellow green (145B on RHS Colour Chart)
	Position of longest leaf:	in central third
Leaf	Length:	12.8 cm
	Leaf arrangement:	opposite leaf arrangement
	Leaf attachment:	sessile
	Leaf apex:	acuminate
	Leaf margin:	entire
	Leaf base:	rounded
	Leaf texture (inner side):	smooth
	Leaf texture (outer side):	smooth
	Leaf color (inner side):	moderate olive green (137A on RHS Colour Chart)
	Leaf color (outer side):	moderate yellow green (138C on RHS Colour Chart)
	Leaf venation pattern:	parallel venation (three lines)
	Leaf venation color:	light yellow green (150D on RHS Colour Chart)
	Width:	1.5 cm
	Shape:	narrow lanceolate
	Shape in cross section:	folded upwards
	Shape in longitudinal section:	convex
	Twisting:	present
	Number of conspicuous veins:	3
	Anthocyanin coloration:	absent
Inflorescence	Distribution of flowers:	clustered
	Position of flowers:	terminal and axillary
	Number of inflorescences per plant per season (average):	335.0
Plant:	Number of terminal flowers (average):	6.5
	Typical growth habit:	erect
	Plant height (average):	71.0 cm
	Plant spread (average):	72.8 cm
	Plant shape:	erect
	Number of flowers per inflorescence:	top: 6.5 others: 4.1
	Number of flowers at central flowering node (average):	4.1
	Number of flowering node:	7.3
Flower bud (about 4 days before flowering)	Shape of bud:	oval
	Length of bud (average):	39.22 mm
	Diameter of bud (average):	12.68 mm
	Color of bud:	greyish purplish red (N77B on RHS Colour Chart)
Flower	Type:	double
	Time of flowering:	early October
	Flower longevity (potted plant):	9 days
	Flower longevity (cut flower):	5 days
Corolla	Depth:	56.0 mm
	Diameter at middle third:	26.0 mm
	Shape:	campanulate
	Diameter at top:	40.0 mm
	Curvature of lobes:	reflexed
	Margin of lobes:	entire
	Texture of lobes:	smooth
	Color of outer side of lobes:	pale purple (N75C on RHS Colour Chart)
	Color of inner side of lobes:	light redding purple (N75A on RHS Colour Chart)
	Tube length (average):	27.7 mm
	Tube texture:	smooth
	Color of inner side of tube:	very light purple (76B on RHS Colour Chart)
	Color of upper part of inner side of tube:	strong purple (77B on RHS Colour Chart)
	Color of outer side of tube:	pale purple (N75C on RHS Colour Chart)
	Color of upper part of outer side of tube:	greyish purplish red (N77D on RHS Colour Chart)
	Streaked pattern on outer side of tube:	present
	Color of streaked pattern on outer side of tube:	greyish purplish red (N77B on RHS Colour Chart)
	Number of lobes:	5
	Length of lobes:	10.4 mm

TABLE 2-continued

	Width of lobes:	13.1 mm
	Shape of lobes:	obovate
	Shape of distal end of lobes:	obtuse
	Presence of secondary lobes:	present
	Shape of secondary lobes:	acute
	Shape of secondary lobe apex:	acute
	Margin of secondary lobes:	entire
	Length of secondary lobes (average):	3.6 mm
	Width of secondary lobes (average):	4.6 mm
	Texture of secondary lobes:	smooth
	Color of secondary lobes:	light reddish purple (N75A on the RHS Colour Chart) for both surfaces
Para-corolla	Presence of paracorolla:	present
	Number of paracorolla lobes (average):	5.4
Calyx	Anthocyanin coloration:	absent
	Length of tube:	16.3 mm
	Diameter of tube:	9.1 mm
	Shape of tube:	campanulate
	Texture of tube (inner side):	smooth
	Texture of tube (outer side):	slightly wrinkled
	Shape of lobe:	lanceolate
Sepal	Sepal number:	5
	Septal lobe shape:	lanceolate
	Sepal length (average):	11.8 mm
	Sepal width (average):	3.7 mm
	Sepal apex:	acute
	Sepal margin:	entire
	Sepal texture (inner side):	smooth
	Sepal texture (outer side):	smooth
	Sepal color (inner side):	moderate yellowish green (138A on the RHS Colour Chart)
	Sepal color (outer side):	moderate yellow green (139D on the RHS Colour Chart)

TABLE 2-continued

Repro-ductive organs	Stamens and anther:	stamens are mutated into petals and there is no anther
	Pistil number:	1
	Pistil length (average):	35.1 mm
	Stigma (none)	
	Style (none)	
	Ovary color:	light yellow green (145C on RHS Colour Chart)
Roots	Root shape:	fine and fibrous
Pedicel	No pedicel	
Peduncle	Peduncle length (average):	1.95 mm
	Peduncle diameter (average):	2.45 mm
	Peduncle texture:	smooth
	Peduncle color:	light yellow green (145B on RHS Colour Chart)

In the above chart, specific numbers correspond to average values.

Other features of the plant are as follows:

Disease resistance: Normal resistance was observed for pests and diseases in Iwate, Japan, using pest control by chemical spraying for gentian.

Cold hardiness: Strong, the variety can withstand winter in Iwate, Japan, including low temperatures of about −10° C. with abundant snow.

Heat tolerance: Normal, the variety can withstand summer in Iwate, Japan, including high temperatures of about 35° C.

Flower fragrance: Absent.

We claim:

1. A new and distinct variety of *Gentiana* plant named 'Ashiro 29-2065', substantially as described and illustrated herein.

* * * * *

FIG. 1

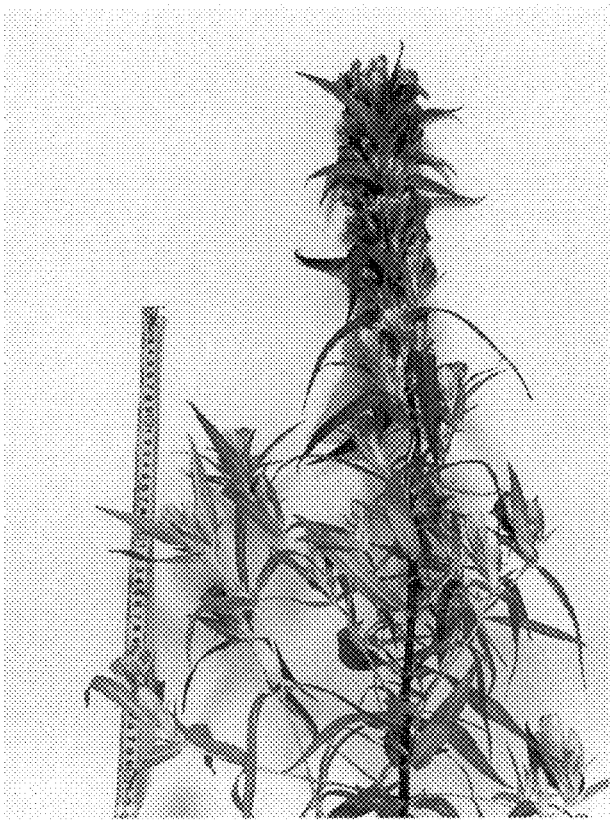

FIG. 2

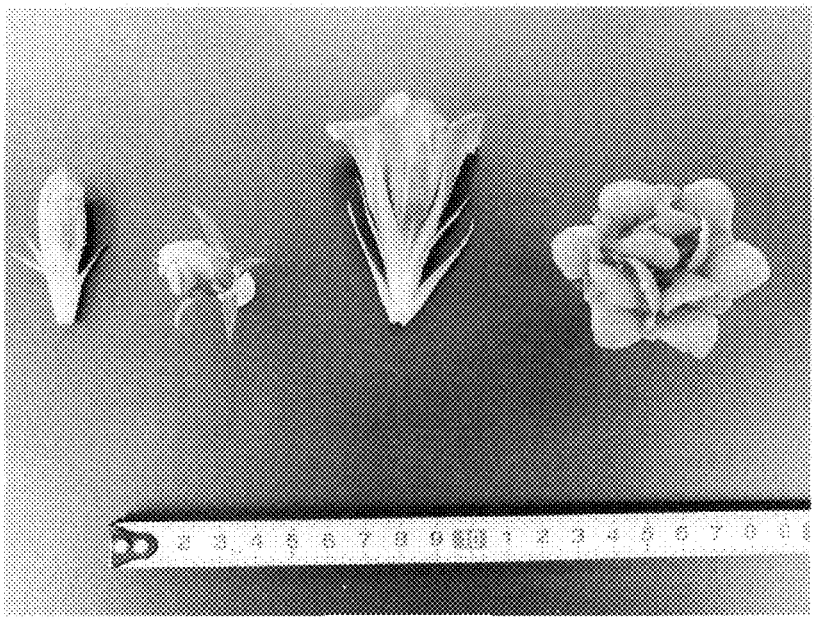

FIG. 3

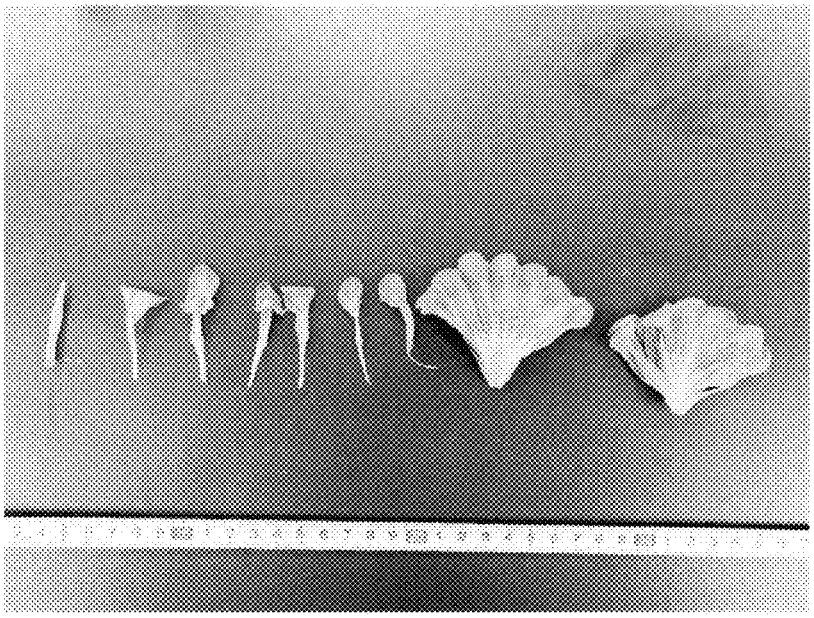

FIG. 4

FIG. 5

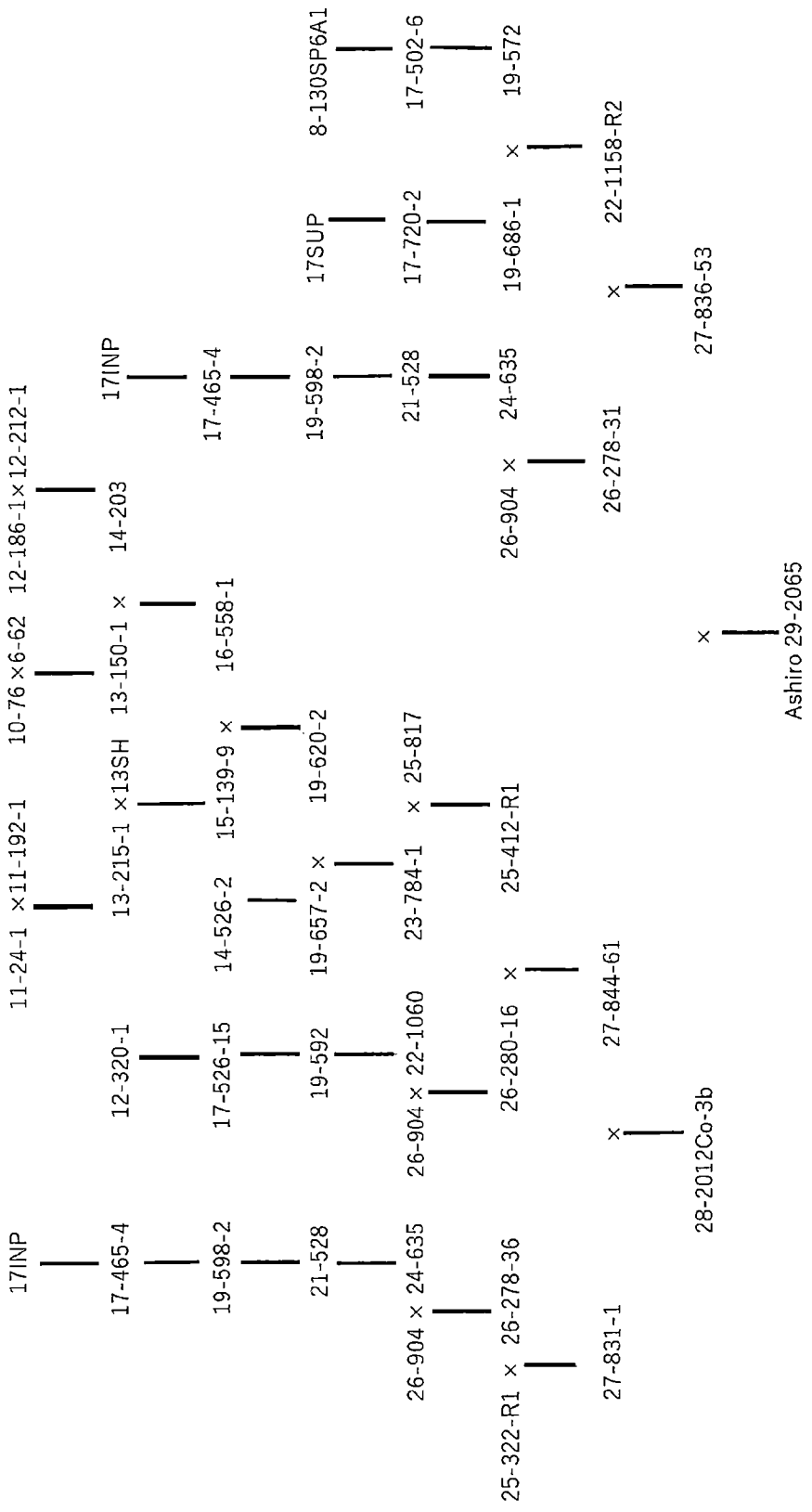
17INP
17-465-4
19-598-2
21-528
26-904 × 24-635
25-322-R1 × 26-278-36
27-831-1
11-24-1 ×11-192-1
12-320-1
17-526-15
19-592
26-904 × 22-1060
26-280-16 × 27-844-61
28-2012Co-3b
13-215-1 ×13SH 13-150-1 × 16-558-1
14-526-2 15-139-9 × 19-620-2
19-657-2 × 25-817
23-784-1 × 25-412-R1
10-76 ×6-62 12-186-1×12-212-1
14-203
17INP
17-465-4
19-598-2
21-528
26-904 × 24-635
26-278-31
27-836-53
17SUP 8-130SP6A1
17-720-2 17-502-6
19-686-1 × 19-572
22-1158-R2
Ashiro 29-2065

FIG. 6