



APPLICATIONS UNDER EXAMINATION

PENSTEMON

PENSTEMON
(Penstemon hartwegii)

Proposed denomination: 'Penharcar'
Trade name: Artist Bell Carmine Frost
Application number: 07-6026
Application date: 2006/11/14 (priority claimed)
Applicant: Syngenta Crop Protection AG, Basel, Switzerland
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: M. Gutter, Enkhuizen, The Netherlands

Variety used for comparison: 'Pheni Magna' (Phoenix Magenta)

Summary: *'Penharcar' differs from the reference variety, 'Pheni Magna' mainly in anthocyanin colouration of the stem, leaf width, corolla colour and conspicuousness of markings on the inner side of the corolla. The intensity of anthocyanin colouration on the stem of 'Penharcar' is weak to medium whereas it is absent to very weak on 'Pheni Magna'. The leaves of 'Penharcar' are narrower than those of 'Pheni Magna'. The main colour of the corolla of 'Penharcar' is purple whereas it is purple to purple red on 'Pheni Magna'. 'Penharcar' has strong conspicuousness of markings on the inner side of the corolla tube whereas they are weak to medium on 'Pheni Magna'.*

Description:

PLANT: upright to intermediate growth habit

STEM: sparse pubescence, weak to medium intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, weakly dentate margins, medium green on upper side, weak glossiness on upper side, petiole absent

CALYX: sparse to medium pubescence, weak anthocyanin colouration

SEPAL: ovate, entire to weakly serrate margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, two per axil, bilabiate (upper lip with two upper petal lobes and lower lip with three lower petal lobes)

COROLLA LOBES: main colour on inner side is purple, secondary colour on inner side is white at transition to corolla tube

COROLLA TUBE: white, main colour on outer side is purple with white secondary colour at base of petal lobes fading towards base of corolla tube

MARKINGS ON INNER SIDE OF COROLLA: strong, purple

Origin and Breeding: 'Penharcar' was developed through inbred breeding of the variety 'Gigant'. One cycle of half-sib selection between June 2002 through to October 2002 was conducted in Enkhuizen, the Netherlands. Seeds from the selection were sown in January 2003. A single seedling was selected based on criteria including compact growth habit, branching and time of flowering. Asexual reproduction by cutting was first conducted in August 2003 in Enkhuizen, the Netherlands.

Tests and Trials: The comparative test and trial of 'Penharcar' was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for 'Penharcar'

	'Penharcar'	'Pheni Magna'*
<i>Leaf width (cm)</i>		
mean	2.4	3.0
std. deviation	0.23	0.26
<i>Colour of upper lobes of corolla (RHS)</i>		
inner side-main	71B-C	61B-C
inner side-secondary	whiter than 155B at throat of corolla	whiter than 155B at throat of corolla
<i>Colour of lower lobes of corolla (RHS)</i>		
inner side-main	71C	61B
inner side-secondary	whiter than 155B	white to 65D
outer side-main	71B-C	61B-C
outer side-secondary	whiter than 155B	white to 65D

*reference variety



Penstemon: 'Penharcar' (left) with reference variety 'Pheni Magna' (right)

Proposed denomination: 'Penhared'
Trade name: Artist Bell Red Frost
Application number: 07-6023
Application date: 2006/11/14 (priority claimed)
Applicant: Syngenta Crop Protection AG, Basel, Switzerland
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: M. Gutter, Enkhuizen, The Netherlands

Variety used for comparison: 'Rubycunda'

Summary: The variety 'Penhared' differs from the reference variety, 'Rubycunda' mainly in corolla length, conspicuousness of the markings on the inner side of the corolla tube and the secondary colour on the outer side of the corolla. The corolla of

'Penhared' is shorter than that of 'Rubycunda'. There are no markings on the inner side of the corolla tube of 'Penhared' whereas they are very weak on 'Rubycunda'. The secondary colour on the outer side of the corolla tube of 'Penhared' is red to dark pink red and white whereas it is red and white on 'Rubycunda'.

Description:

PLANT: upright growth habit

STEM: sparse pubescence, weak intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, entire to weakly dentate margins, medium green on upper side, weak glossiness on upper side, petiole absent

CALYX: sparse pubescence, weak intensity of anthocyanin colouration

SEPAL: ovate, entire margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, two per axil, bilabiate (upper lip with two upper petal lobes and lower lip with 3 lower petal lobes)

UPPER COROLLA LOBES: main colour on inner side is red (RHS 46B), secondary colour on inner side is purple red (RHS N57B) at transition to white corolla tube

LOWER COROLLA LOBES: main colour on inner side is red (RHS 46B-C), secondary colour on inner side is white (RHS 155B) and located in area of transition to corolla tube

COROLLA TUBE: white (whiter than RHS 155B) on inner side, main colour on outer side is red (RHS 46C) with red to dark pink red (RHS 50A-B) and white (RHS 155B) secondary colour on outer side located at the basal half of the corolla tube

MARKINGS ON INNER SIDE OF COROLLA: absent

Origin and Breeding: 'Penhared' was developed through inbred breeding of the variety 'Picotee'. One cycle of half-sib selection between June 2002 through to October 2002 was conducted in Enkhuizen, the Netherlands. Seeds from the selection were sown in January 2003 and a single seedling was selected in July 2003. Selection criteria included compact growth habit, branching and time of flowering. Asexual reproduction by cutting was first conducted in August 2003 in Enkhuizen, the Netherlands.

Tests and Trials: The comparative test and trial of 'Penhared' was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for 'Penhared'

	'Penhared'	'Rubycunda'*
<i>Inflorescence height (cm)</i>		
mean	23.2	26.4
std. deviation	2.31	1.84
<i>Corolla length (cm)</i>		
mean	3.6	4.6
std. deviation	0.12	0.33
<i>Colour of outer side of corolla tube (RHS)</i>		
main	46C	46C
secondary	50A-B, 155B	46D, 155B

*reference variety



Penstemon: 'Penhared' (left) with reference variety 'Rubycunda' (right)

Proposed denomination: 'Penharvio'
Trade name: Artist Bell Violet Frost
Application number: 07-6024
Application date: 2006/11/14 (priority claimed)
Applicant: Syngenta Crop Protection AG, Basel, Switzerland
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: M. Gutter, Enkhuizen, The Netherlands

Varieties used for comparison: 'Pheni Vio' (Phoenix Violet) and 'Peni Laver' (Phoenix Lavender)

Summary: 'Penharvio' differs from the reference varieties, 'Pheni Viol' and 'Peni Laver' mainly in corolla diameter, corolla colour, conspicuousness of the markings on the inner side of the corolla tube and the main colour of the outer side of the corolla tube. The diameter of the corolla of 'Penharvio' is larger than that of both reference varieties. The upper and lower lips of the corolla of 'Penharvio' are more blue violet than those of both reference varieties which have more red tones. 'Penharvio' has no markings on the inner side of the corolla tube whereas they are weak on 'Pheni Vio'.

Description:

PLANT: upright growth habit

STEM: very sparse pubescence, absent to very weak intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, entire to weakly dentate margins, medium green on upper side, weak glossiness on upper side, petiole absent

CALYX: very sparse pubescence, weak intensity of anthocyanin colouration

SEPAL: ovate, entire margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, three per axil, bilabiate (upper lip with two upper petal lobes and lower lip with three lower petal lobes)

COROLLA LOBES: main colour on inner side is violet with white secondary colour on inner side at transition to corolla tube

COROLLA TUBE: white to light blue violet on inner side, main colour on outer side is white with violet secondary colour on outer side located at the base of all petal lobes

MARKINGS ON INNER SIDE OF COROLLA: absent

Origin and Breeding: ‘Penharvio’ was developed through inbred breeding of the variety ‘Gigant’. One cycle of half-sib selection was conducted from June 2002 through to October 2002 in Enkhuizen, the Netherlands. Seeds from the selection were sown in January 2003 and a single seedling was selected in July 2003. Selection criteria included compact growth habit, branching and time of flowering. Asexual reproduction by cutting was first conducted in August 2003 in Enkhuizen, the Netherlands.

Tests and Trials: The comparative test and trial of ‘Penharvio’ was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for ‘Penharvio’

	‘Penharvio’	‘Pheni Vio’*	‘Peni Laver’*
<i>Corolla diameter (cm)</i>			
mean	3.9	3.3	3.2
std. deviation	0.23	0.15	0.22
<i>Colour of upper lobes of corolla (RHS)</i>			
inner side-main	N82B-C	N78A	77A
inner side-secondary	155B	155B	155B
<i>Colour of lower lobes of corolla (RHS)</i>			
inner side-main	N82B-N81C	N78A	77A(fades to N82B with N82A at margins)
inner side-secondary	whiter than 155B	whiter than 155B	whiter than 155B
<i>Colour of outer side of corolla tube (RHS)</i>			
main	whiter than 155B	72A	whiter than 155B
secondary	N82B-C	whiter than 155B	N78A-B
<i>Colour of inner side of corolla tube (RHS)</i>			
main	white to 85D	155B	whiter than 155B

*reference varieties



Penstemon: 'Penharvio' (left) with reference varieties 'Pheni Vio' (centre) and 'Peni Laver' (right)

Proposed denomination: 'Penharwi'
Trade name: Artist Bell White
Application number: 07-6025
Application date: 2006/11/14 (priority claimed)
Applicant: Syngenta Crop Protection AG, Basel, Switzerland
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: M. Gutter, Enkhuizen, The Netherlands

Variety used for comparison: 'Pheni Ablos' (Phoenix Appleblossom)

Summary: *'Penharwi' differs from the reference variety, 'Pheni Ablos' mainly in leaf length and secondary colour of the corolla lobe margins. The leaves of 'Penharwi' are longer than those of 'Pheni Ablos'. The corolla lobe margins of 'Penharwi' are purple red to light blue pink whereas they are blue pink on 'Pheni Ablos'.*

Description:

PLANT: upright growth habit

STEM: absent to very sparse pubescence, absent to very weak intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, entire to weakly dentate margins, medium green on upper side, weak to medium glossiness on upper side, petiole absent

CALYX: sparse to medium pubescence, very weak anthocyanin colouration

SEPAL: ovate, entire margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, three per axil, bilabiate (upper lip with two upper petal lobes and lower lip with three lower petal lobes)

COROLLA LOBES: main colour on inner side is white with purple red to light blue pink secondary colour on inner side located at margin edges

COROLLA TUBE: white, main colour on outer side is white with no secondary colour present

MARKINGS ON INNER SIDE OF COROLLA: absent

Origin and Breeding: ‘Penharwi’ was developed through inbred breeding of the variety ‘Gigant’. One cycle of half-sib selection between June 2003 through to October 2003 was conducted in Enkhuizen, the Netherlands. Seeds from the selection were sown in January 2004 with a single seedling selected in July 2004. Selection criteria included compact growth habit, branching and time of flowering. Asexual reproduction by cutting was first conducted in August 2004 in Enkhuizen, the Netherlands.

Tests and Trials: The comparative test and trial of ‘Penharwi’ was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for ‘Penharwi’

	‘Penharwi’	‘Pheni Ablos’*
<i>Leaf length (cm)</i>		
mean	10.0	8.9
std. deviation	0.47	0.82
<i>Colour of upper lobes of corolla (RHS)</i>		
inner side-main	lighter than 155B	lighter than 155B
inner side-secondary	55B-C darker at margins	62A at margins
<i>Colour of lower lobes of corolla (RHS)</i>		
inner & outer side-main	lighter than 155B	lighter than 155B
inner side-secondary	55B-C darker at margins	62A-B at margins
*reference variety		



Penstemon: 'Penharwi' (left) with reference variety 'Pheni Ablos' (right)

Proposed denomination: 'Peni Laver'
Trade name: Phoenix Lavender
Application number: 07-6109
Application date: 2007/12/24
Applicant: Goldsmith Seeds, Inc., Gilroy, California, United States of America
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: Jason Jandrew, Goldsmith Seed Inc., Mountain View, California, United States of America

Variety used for comparison: 'Pheni Vio' (Phoenix Violet)

Summary: *'Peni Laver' differs from the reference variety, 'Pheni Vio' mainly in leaf margin type and colour of the corolla lobes and tube. The leaf margins of 'Peni Laver' are entire whereas they are dentate on 'Pheni Vio'. The main colour of the lobes of the corolla of 'Peni Laver' is violet whereas it is more red violet on 'Pheni Vio'. The main colour of the outer side of the corolla tube of 'Peni Laver' is white with violet secondary colour whereas it is purple with white secondary colour on 'Pheni Vio'.*

Description:

PLANT: upright growth habit

STEM: sparse pubescence, absent to very weak intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, mostly entire margins, medium to dark green on upper side, weak glossiness on upper side, petiole absent

CALYX: sparse pubescence, weak anthocyanin colouration

SEPAL: ovate, entire margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, three per axil, bilabiate (upper lip with two upper petal lobes and lower lip with three lower petal lobes)

COROLLA LOBES: main colour on inner side is violet with white secondary colour at transition to corolla tube

COROLLA TUBE: white, main colour on outer side is white with violet secondary colour at the base of all petal lobes, streaked toward the base of the tube

MARKINGS ON INNER SIDE OF COROLLA: absent

Origin and Breeding: ‘Peni Laver’ was developed by the breeder, Jason Jandrew, an employee of Goldsmith Seeds in California, U.S.A. as part of a planned pedigree breeding program. It originated from a cross made in July 2005 between the female parent ‘101-2’, a proprietary seedling with white flowers, and the male parent ‘104-1’, a proprietary seedling with apple blossom coloured flowers. ‘Peni Laver’ was selected on April 2006 based on plant growth habit and flower colour.

Tests and Trials: The comparative test and trial of ‘Peni Laver’ was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for ‘Peni Laver’

	‘Peni Laver’	‘Pheni Vio’*
<i>Colour of upper lobes of corolla (RHS)</i>		
inner side-main	77A	N78A
inner side-secondary	155B	155B
<i>Colour of lower lobes of corolla (RHS)</i>		
inner side-main	77A (fades to N82B with N82A at margins)	N78A
inner side-secondary	whiter than 155B	whiter than 155B
<i>Colour of corolla tube (RHS)</i>		
outer side-main	whiter than 155B	72A
outer side-secondary	N78A-B	whiter than 155B

*reference variety



Penstemon: 'Peni Laver' (left) with reference variety 'Pheni Vio' (right)

Proposed denomination: 'Peni Pina09'
Trade name: Phoenix Pink 09
Application number: 07-6111
Application date: 2007/12/24
Applicant: Goldsmith Seeds, Inc., Gilroy, California, United States of America
Agent in Canada: Brenda Cole, BioFlora Inc., St. Thomas, Ontario
Breeder: Jason Jandrew, Goldsmith Seed Inc., Mountain View, California, United States of America

Variety used for comparison: 'Pheni Pinka' (Phoenix Pink)

Summary: 'Peni Pina09' differs from the reference variety, 'Pheni Pinka', mainly in plant height, length of stem internodes, leaf length, inflorescence height, corolla lobe colour and conspicuousness of markings on the inner side of the corolla tube. The plants, internodes, leaves and inflorescences of 'Peni Pina09' are shorter than those of 'Pheni Pinka'. The corolla lobes of the 'Peni Pina09' are purple red with white secondary colour whereas they are light blue pink with purple red secondary colour on 'Pheni Pinka'. There are no markings on the inner side of the corolla tube of 'Peni Pina09' whereas the markings are strongly conspicuous on 'Pheni Pinka'.

Description:

PLANT: upright growth habit

STEM: sparse pubescence, absent to very weak intensity of anthocyanin colouration

LEAF: opposite arrangement along stem, lanceolate, narrow acute tip, entire margins, medium green on upper side, weak glossiness on upper side, petiole absent

CALYX: sparse pubescence, weak anthocyanin colouration

SEPAL: ovate, entire margin

INFLORESCENCE: raceme type

FLOWER: located both in axillary and terminal positions, three per axil, bilabiate (upper lip with two upper petal lobes and lower lip with three lower petal lobes)

UPPER COROLLA LOBES: main colour on inner side is mainly purple red with white secondary colour on inner side at transition to corolla tube

COROLLA TUBE: white, main colour on outer side is white with purple red secondary colour present at the base of all petal lobes

MARKINGS ON INNER SIDE OF COROLLA: absent

Origin and Breeding: ‘Peni Pina09’ was developed by the breeder, Jason Jandrew, an employee of Goldsmith Seeds in California, U.S.A. as part of a planned pedigree breeding program. It originated from a cross made in July 2005 between the proprietary female parent line designated ‘104-1’ with apple blossom coloured flowers, and the proprietary male parent line designated ‘125-3’ with white with red-throat coloured flowers. ‘Peni Pina09’ was selected in April 2006 based on plant growth habit and flower colour and quality.

Tests and Trials: The comparative test and trial of ‘Peni Pina09’ was conducted in a polyhouse during the spring-summer of 2008 at Bioflora Inc. in St. Thomas, Ontario. The trial included 15 plants of each variety. All plants were grown from rooted cuttings transplanted into 20 cm pots on May 15, 2008. Observations and measurements were taken from 10 plants of each variety on July 18, 2008. All colour determinations were made using the 2001 Royal Horticultural Society (RHS) Colour Chart.

Comparison table for ‘Peni Pina09’

	‘Peni Pina09’	‘Pheni Pinka’*
<i>Plant height (cm)</i>		
mean	40.1	62.6
std. deviation	3.47	3.49
<i>Length of internodes (cm)</i>		
mean	3.0	4.7
std. deviation	0.55	0.48
<i>Leaf length (cm)</i>		
mean	7.9	11.6
std. deviation	0.32	0.74
<i>Inflorescence height (cm)</i>		
mean	17.5	28.8
std. deviation	2.43	2.87
<i>Colour of upper lobes of corolla (RHS)</i>		
inner side-main	58B (62C at transition to corolla tube)	69B
inner side-secondary	155B at corolla tube	58C-D at margin, 60B along midvein
<i>Colour of lower lobes of corolla (RHS)</i>		
inner side-main	58B-C	69B
inner side-secondary	155B	58C-D at margin, 60B along midvein and veins inside corolla tube, 60A band across lower petal at transition to corolla tube

*reference variety



Penstemon: 'Peni Pina09' (left) with reference variety 'Pheni Pinka' (right)
