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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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DRAFT

GREVILLEA

UPOV Code: GREVI

Grevillea R. Br. corr. R. Br.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Australia

to be considered by the

Technical Working Party for Ornamental Plants and Forest Trees
at its forty-seventh session, to be held in Naivasha, Kenya, from May 19 to 23, 2014

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Grevillea R. Br. corr. R. Br.	Grevillea			

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Grevillea* R. Br. corr. R. Br..

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of plants expressing relevant characteristics of the variety in the first growing cycle.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

10 plants.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

The minimum duration of tests should normally be a single growing cycle.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 10 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 9 plants or parts taken from each of 9 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, “G” provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

(a) Plant: habit (characteristic 1)
(b) Leaf: division of blade (characteristic 12)
(c) Inflorescence: form (characteristic 37)
(d) Inflorescence: predominant color (characteristic 39)
(e) Perianth: color (characteristic 54)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS

and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS – see Chapter 4.1.5

(a) See Explanations on the Table of Characteristics in Chapter 8.1

(+) See Explanations on the Table of Characteristics in Chapter 8.2.

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. **(*)** **(+)**	**VG**	**Plant: habit**					
PQ	**(a)**	upright				Callum's Gold	1
		bushy				Honey Gem	2
		spreading				Ninderry-Sunrise	3
		prostrate				Raptor	4
2. **(*)** **(+)**	**VG**	**Plant: attitude of branches**					
QN	**(a)**	erect				Callum's Gold	1
		erect to semi-erect				Blood Orange	2
		semi-erect				Honey Gem	3
		semi-erect to horizontal				Ninderry-Sunrise	4
		horizontal				Raptor	5
3.	**VG/ MS**	**Plant: height of foliage**					
QN	**(a)**	short					3
		medium					5
		tall					7
4.	**VG**	**Plant: density of foliage**					
QN	**(a)**	sparse				Raptor	1
		medium				Callum's Gold	2
		dense				Billy Bonkers	3
5. **(+)**	**VG**	**Young stem: color**					
PQ	**(b)**	yellow green				Honey Gem	1
		green				Coastal Prestige, Fireworks	2
		purple				Raptor	3
		orange				Callum's Gold	4
		brown				Autumn Waterfall	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. **(*)** **(+)**	**VG**	**Stem: color**					
PQ	**(a)**	yellow green				New Blood	1
		green				Burke 3	2
		orange				Ninderry-Sunrise	3
		purple				Callum's Gold	4
		brown				Honey Gem	5
7.	**VG**	**Young stem: hairiness**					
QL	**(b)**	absent					1
		present				Knockout	9
8. **(+)**	**VG/ MS**	**Leaf: length of blade**					
QN	**(a)**	short				[Example]	3
		medium				[Example]	5
		long				[Example]	7
9. **(+)**	**VG/ MS**	**Leaf: width of blade**					
QN	**(a)**	narrow				[Example]	3
		medium				[Example]	5
		broad				[Example]	7
10.	**VG**	**Leaf: attitude relative to stem**					
QN	**(a)**	erect				Raptor	1
		erect to semi-erect				Honey Gem	2
		semi-erect				Callum's Gold	3
		semi-erect to horizontal				Billy Bonkers	4
		horizontal				Prostrate Yellow	5
11.	**VG**	**Leaf: undulation of margin**					
QN	**(a)**	weak				Callum's Gold	3
		medium				Raptor	5
		strong				Entrée	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12. **(*)**	**VG**	**Leaf: division of blade**					
QL	**(a)**	absent				Fire Cracker	1
		present				Callum's Gold	9
13. **(*)** **(+)**	**VG**	**Leaf: blade shape**					
PQ	**(a)**	lanceolate				H22	1
		ovate				Burke 3	2
		linear				Fire Cracker	3
		oblong					4
		elliptic				TWD01	5
		rhombic				Molly	6
		circular					7
		obovate					8
14.	**VG**	**Leaf: degree of division of blade**					
QL	**(a)**	primary				Raptor	1
		secondary				Autumn Waterfall	2
		tertiary				Callum's Gold	3
15.	**VG**	**Leaf: depth of division of blade**					
QN	**(a)**	sinus less than one third of way to midrib					1
		sinus one third to two thirds of way to midrib				Bedspread	2
		sinus greater than two thirds of way to midrib				Callum's Gold	3
16.	**VG**	**Leaf: number of lobes**					
QN	**(a)**	few				Parakeet Pink	3
		medium				Callum's Gold	5
		many				Honey Gem	7
17.	**VG**	**Leaf: regularity of lobing**					
QL	**(a)**	regular				Callum's Gold	1
		irregular				Raptor	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	**VG**	**Leaf: attitude of longitudinal axis of lobes to longitudinal axis of midrib**					
QN	**(a)**	erect					1
		erect to semi-erect				Honey Gem	2
		semi-erect				Callum's Gold	3
		semi-erect to horizontal					4
		horizontal					5
19.	**VG**	**Leaf: shape of apex of sinus**					
(+)							
PQ	**(a)**	pointed				Ninderry-Sunrise	1
		rounded					2
		flattened				Callum's Gold	3
20.	**VG/ MS**	**Leaf: width of sinus**					
(+)							
QN	**(a)**	very narrow					1
		narrow					3
		medium				Billy Bonkers	5
		broad				Callum's Gold	7
		very broad					9
21.	**VG/ MS**	**Lobe: length**					
QN	**(a)**	short				Autumn Waterfall	3
		medium				Billy Bonkers	5
		long				Callum's Gold	7
22.	**VG/ MS**	**Lobe: width**					
QN	**(a)**	narrow				Callum's Gold	3
		medium				Ivory Whip?	5
		broad					7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		**Leaf: shape of apex**					
(+)							
PQ	**(a)**	acute				Little Honey	1
		obtuse					2
		truncate					3
24.	**VG**	**Leaf: differentiated tip**					
QL	**(a)**	mucronate				H22	1
		apiculate				New Blood	2
25. **(*)** **(+)**	**VG**	**Leaf: profile in cross section**					
PQ	**(a)**	flat or slightly recurved				Raptor	1
		strongly recurved				Callum's Gold	2
		angularly revolute to the mid vein					3
		smoothly revolute to the mid vein				Little Honey	4
26. **(*)**	**VG**	**Leaf: intensity of green color of upper side**					
QN	**(a)**	light				Autumn Waterfall	1
		medium				Raptor	2
		dark				Callum's Gold	3
27. **(*)** **(+)**	**VG**	**Leaf: color of lower side**					
PQ	**(a)**	white				Callum's Gold	1
		light green				Raptor	2
		medium green				Ninderry-Sunrise	3
		dark green					4
		red green					5
28.	**VG**	**Leaf: degree of hairiness on upper side**					
QN	**(a)**	weak				Ninderry-Sunrise	1
		medium				Callum's Gold	2
		strong					3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29.	**VG**	**Leaf: degree of hairiness on lower side**					
QN	**(a)**	weak				Little Honey	1
		medium				Blood Orange	2
		strong				Ninderry-Sunrise	3
30.	**VG**	**Leaf: color of hairs on lower side**					
QL	**(a)**	white				Callum's Gold	1
		red brown				Honey Gem	2
31.	**VG/ MS**	**Leaf: length of petiole**					
QN	**(a)**	short				Raptor	3
		medium				Callum's Gold	5
		long				Red Rover	7
32.	**VG**	**Flowering branch: position of inflorescence**					
QL	**(c)**	terminal only				Ninderry-Sunrise	1
		axillary only					2
		both terminal and axillary				Callum's Gold	3
33.	**VG**	**Inflorescence: attitude**					
Q	**(c)**	erect				Red Rover	1
		erect to semi-erect				Little Honey	2
		semi-erect				Honey Gem	3
		semi-erect to horizontal				Blood Orange	4
		horizontal				Callum's Gold	5
		horizontal to semi-drooping				Ninderry-Sunrise	6
		semi-drooping					7
		semi-drooping to drooping					8
		drooping				Entrée	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34.	**VG**	**Inflorescence: branching**					
QN	**(c)**	absent or very weak				Ninderry-Sunrise	1
		weak				Red Rover	2
		medium				Callum's Gold	3
35.	**VG/ MS**	**Inflorescence: length**					
QN	**(c)**	short				Raptor	3
		medium				Callum's Gold	5
		long				Autumn Waterfall	7
36.	**VG/ MS**	**Inflorescence: width**					
QN		narrow				Raptor	3
		medium				Callum's Gold	5
		broad				Red Rover	7
37. **(*)** **(+)**	**VG**	**Inflorescence: form**					
PQ	**(c)**	secund				Ninderry-Sunrise	1
		irregular				LadyO	2
		cylindrical				Callum's Gold	3
		triangular				Fireworks	4
		dome					5
		ovoid					6
		globose					7
		umbellate				H22	8
38. **(*)** **(+)**	**VG**	**Inflorescence: sequence of flower opening**					
QL	**(c)**	acropetal				Callum's Gold	1
		basipetal				Knockout	2
		synchronous				Coastal Prestige	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39 (*)	**VG**	**Inflorescence: predominant color**					
PQ	**(c)**	white				Ivory Whip	1
		green					2
		yellow				Callum's Gold	3
		orange				Ninderry-Sunrise	4
		pink				Blood Orange	5
		red				Raptor	6
		black					7
40.	**VG**	**Inflorescence: density of flowers**					
QN	**(c)**	sparse				Coastal Dawn	3
		medium				Honey Gem	5
		dense				Callum's Gold	7
41.	**VG/ MS**	**Inflorescence: number of flowers**					
QN	**(c)**	few				Fire Cracker?	3
		medium				Raptor	5
		many				Red Rover	7
42.	**VG/ MS**	**Rachis: length**					
QN	**(c)**	short				Raptor	3
		medium				Callum's Gold	5
		long				Honey Gem	7
43. (+)	**VG**	**Pedicel: attitude in relation to rachis**					
QN	**(c)**	leaning away from inflorescence peduncle				Callum's Gold	1
		perpendicular				Ninderry-Sunrise	2
		leaning towards inflorescence peduncle				Autumn Waterfall	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44.	**VG/ MS**	**Pedicel: length**					
QN	**(c)**	very short					1
		short				Callum's Gold	2
		medium				Billy Bonkers	3
		long				Autumn Waterfall	4
45. **(+)**	**VG**	**Bud: attitude of limb in relation to longitudinal axis of bud**					
PQ	**(c)**	upright				Ninderry-Sunrise	1
		horizontal				New Blood	2
		drooping				Callum's Gold	3
46.	**VG**	**Bud: color of limb**					
PQ	**(c)**	yellow				Honey Gem	1
		green				Callum's Gold	2
		orange				Sylvia	3
		pink					4
		red				Raptor	5
		reddish brown					6
		brown				New Blood	7
		black					8
47. **(*)**	**VG**	**Bud: perianth color**					
PQ	**(c)**	white				'Ivory Whip'	1
		yellow				Callum's Gold	2
		green				Ninderry-Sunrise	3
		orange				Entrée	4
		pink				Molly	5
		red				Raptor	6
		black					7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
48.	**VG/ MS**	**Perianth: length**					
QN	**(c)**	short				Raptor	3
		medium				Callum's Gold	5
		long				Red Rover	7
49.	**VG/ MS**	**Perianth: width**					
QN	**(c)**	narrow				Callum's Gold	3
		medium				Ninderry-Sunrise	5
		broad				Entrée	7
50.	**VG**	**Perianth: degree of hairiness (outside of perianth including limb)**					
QN	**(c)**	absent or very weak				Ninderry-Sunrise	1
		weak				Honey Gem	2
		medium				Raptor	3
		strong				Callum's Gold	4
51.	**VG**	**Perianth: hair color**					
QL	**(c)**	white				Raptor	1
		red brown				Callum's Gold	2
52.	**VG**	**Perianth: coherence of tepals on <u>dorsal</u> side**					
QN	**(c)**	less than one third				Callum's Gold	1
		one third to two thirds				Molly	2
		greater than two thirds				Ninderry-Sunrise	3
53.	**VG**	**Perianth: coherence of tepals on <u>ventral</u> side**					
QN	**(c)**	less than one third				Ninderry-Sunrise	1
		one third to two thirds				Molly	2
		greater than two thirds				Callum's Gold	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
54. **(*)**	**VG**	**Perianth: color**					
PQ	**(c)**	white				'Ivory Whip'	1
		yellow				Callum's Gold	2
		green				Sandra Gordon	3
		orange				Ninderry-Sunrise	4
		pink				Blood Orange	5
		red				Raptor	6
		black					7
55.	**VG**	**Tepal: flanging at margin**					
QN	**(c)**	absent or very weak				Callum's Gold	1
		weak				Blood Orange	2
		medium				Red Rover	3
		strong				Coastal Glimpse	4
56.	**VG**	**Nectary: color**					
PQ	**(c)**	white				Ivory Whip	1
		yellow				Honey Gem	2
		green				Billy Bonkers	3
		orange				Callum's Gold	4
		pink					5
		red				Coastal Prestige	6
		black					7
57.	**VG**	**Ovary: hairiness**					
QN	**(c)**	absent or very weak				Knockout	1
		weak				Jubilee	2
		medium				Raptor	3
		strong				Callum's Gold	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
58.	**VG**	**Ovary: color**					
PQ	**(c)**	white				Raptor	1
		yellow				Honey Gem	2
		green				Callum’s Gold	3
		orange					4
		pink					5
		red					6
		black					7
59.	**VG**	**Style: curvature**					
(+)							
QN	**(c)**	straight				Callum’s Gold	1
		gently curved				Ninderry-Sunrise	2
		sharply curved				Pink Surprise	3
60.	**VG**	**Style: position of curve**					
QL	**(c)**	continuous along length				Ninderry-Sunrise	1
		top half				Raptor	2
61.	**VG**	**Style: hairiness**					
QN	**(c)**	absent or very weak				Callum’s Gold	1
		weak				Ivory Whip	2
		medium				Entrée	3
		strong					4
62.	**VG**	**Style: distribution of hair**					
QN	**(c)**	evenly distributed along length				Entrée	1
		concentrated towards style end					2
		concentrated towards ovary end				Ninderry-Sunrise	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
63.	**VG**	**Style: color**					
PQ	**(c)**	white				Ivory Whip	1
		yellow				Golden Yul-lo	2
		green				Misty Pink	3
		orange				Callum’s Gold	4
		pink				Knockout	5
		red				Raptor	6
		black					7
64.	**VG/ MS**	**Pistil: length**					
QN	**(c)**	short				Knockout	3
		medium				Ninderry-Sunrise	5
		long				Callum’s Gold	7
65.	**VG**	**Pistil: length in relation to length of perianth**					
QN	**(c)**	same length					1
		moderately longer				Ivory Whip	2
		much longer				Callum’s Gold	3
66.	**VG**	**Stigma: color**					
PQ	**(c)**	white				Knockout	1
		yellow				Callum’s Gold	2
		green				Raptor	3
		orange				Jubilee	4
		pink				Billy Bonkers	5
		red				Red Rover	6
		black					7
67. **(+)**	**VG**	**Pollen presenter: attitude to style**					
PQ	**(c)**	lateral				Honey Gem	1
		oblique				Callum’s Gold	2
		transverse					3

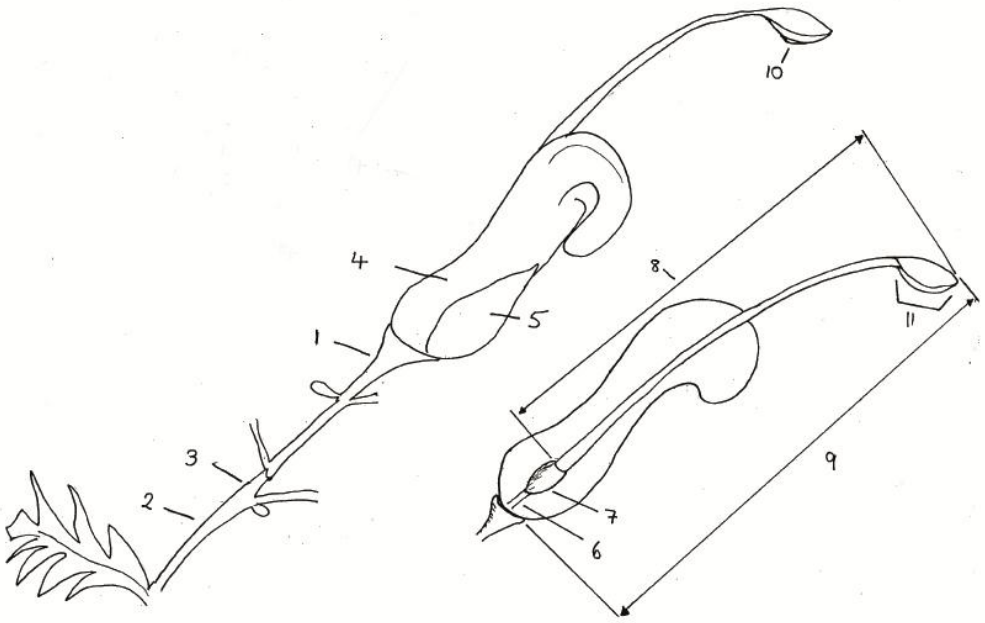
		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
68.	**VG**	**Pollen presenter: concurrence with style**					
(+)							
QL	**(c)**	absent				Callum's Gold	1
		present				Raptor	9
69.	**VG**	**Pollen presenter: shape**					
PQ	**(c)**	cone				Raptor	1
		cylinder				Honey Gem	2
		dome				Callum's Gold	3
		flat				LadyO	4
		convex				Autumn Waterfall	5
70.	**VG**	**Pollen presenter: color**					
PQ	**(c)**	white				Billy Bonkers	1
		yellow				Callum's Gold	2
		green				Raptor	3
		orange				Autumn Waterfall	4
		pink				Fireworks	5
		red				LadyO	6
		black					7
71.	**VG**	**Pollen: color**					
PQ	**(c)**	white				Little Honey	1
		yellow				Callum's Gold	2
		purple				Raptor	3

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

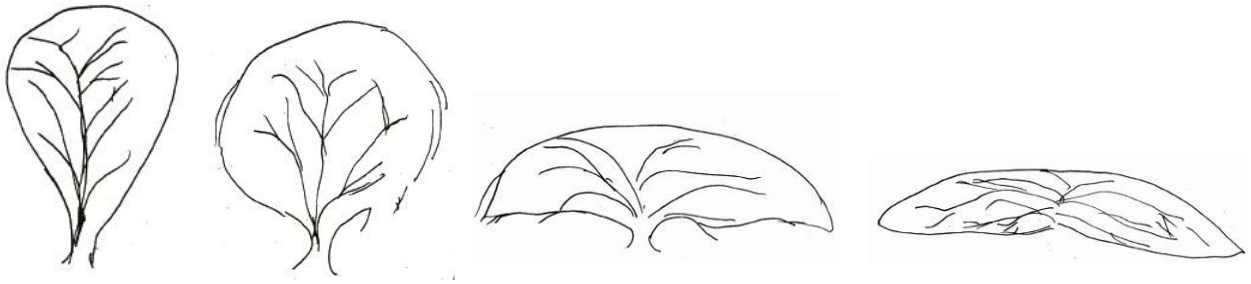
(a) The assessment of plant characteristics should be carried out towards the end of active vegetative growth.
(b) Observations on the young stem below the shoot apex should be early in the season during active vegetative growth
(c) Observations on inflorescence and flower characteristics should be made on a main flowering branch.



1 pedicel
2 peduncle
3 rachis
4 perianth
5 tepals
6 nectary
7 ovary
8 style
9 pistil
10 stigma
11 pollen presenter

8.2 Explanations for individual characteristics

Ad. 1: Plant habit



1 upright | 2 bushy | 3 spreading | 4 prostrate

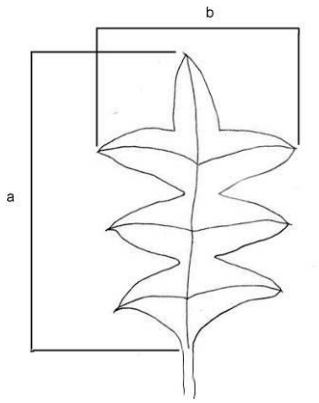
Ad. 5: Young stem color

Sometimes there is a waxy layer covering the stem surface which gives a bluish or whitish appearance. The layer should be removed by rubbing before observing stem color.

Ad. 6: Stem: color

Assessed on side least exposed to sun. Sometimes there is a waxy layer covering the stem surface which gives a bluish or whitish appearance. The layer should be removed by rubbing before observing stem color.

Ad. 8: Leaf: length of blade
Ad. 9: Leaf: width of blade



a – leaf length of blade, observed excluding petiole

b – leaf width of blade, observed at widest point

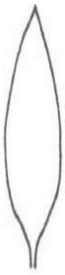
Ad. 13: Leaf: blade shape

Varieties with division of blade absent only.

←	broadest part	→
below middle	at middle	above middle

width (ratio length/width) ← → narrow (high)

broad (low) ← → narrow (high)

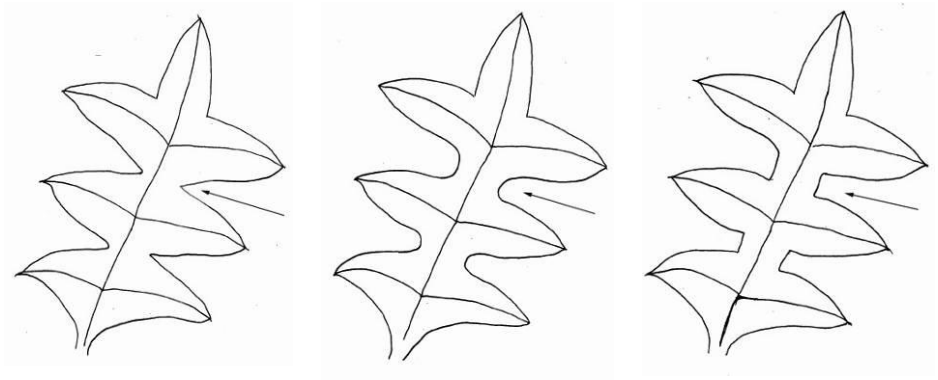
	 3 linear	
 1 lanceolate	 4 oblong	
	 5 elliptic	 8 obovate
	 6 rhombic	
	 7 circular	

Ad. 14: Leaf: degree of division of blade
Ad. 15: Leaf: depth of division of blade
Ad. 16: Leaf: number of lobes
Ad. 17: Leaf: regularity of lobing
Ad. 18: Leaf: attitude of longitudinal axis of lobes to longitudinal axis of midrib
Ad. 21: Lobe: length
Ad. 22: Lobe: width

Varieties with division of blade present only.

Ad. 19: Leaf: shape of apex of sinus

Varieties with division of blade present only.



1
pointed

2
rounded

3
flattened

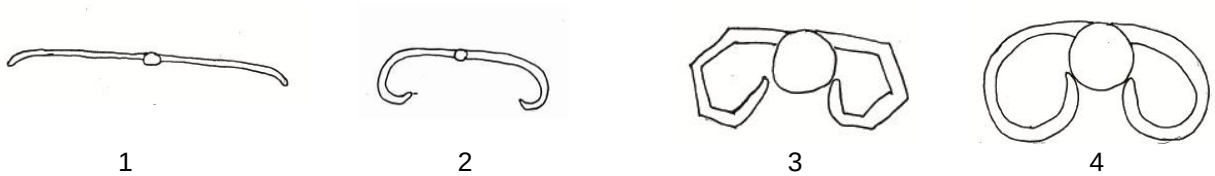
Ad. 20: Leaf: width of sinus

Observed, at widest point, on varieties with division of blade present and with rounded or flattened sinus.

Ad. 23: Leaf: shape of apex
Ad. 24: Leaf: differentiated tip

Observed on varieties with division of blade absent.

Ad. 25: Leaf: profile in cross section



1
flat or slightly recurved

2
strongly recurved

3
angularly revolute to the mid vein

4
smoothly revolute to the mid vein

Ad. 26: Leaf: intensity of green color of upper side
Ad. 27: Leaf: color of lower side

Overall appearance of color with hairs present

Ad. 37: Inflorescence: form

1
secund

2
irregular

3
cylindric

4
triangular

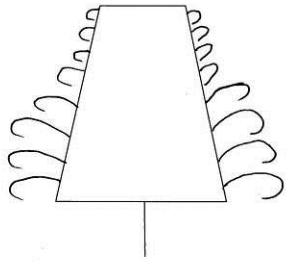
5
dome

6
ovoid

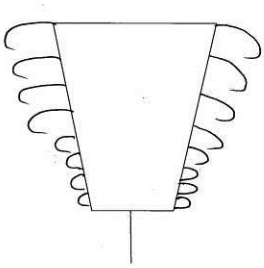
7
globose

8
umbellate

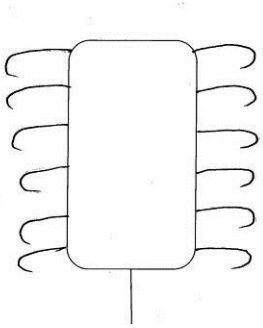
Ad. 38: Inflorescence: sequence of flower opening



1
acropetal



2
basipetal



3
synchronous

Ad. 43: Pedicel: attitude in relation to rachis

1
leaning away from inflorescence peduncle

2
perpendicular

3
leaning towards inflorescence peduncle

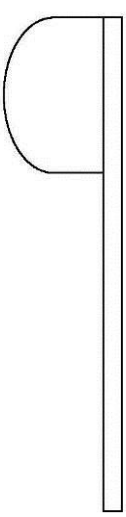
Ad. 45: Bud: attitude of limb in relation to longitudinal axis of bud

Observed during late bud prior to anthesis.

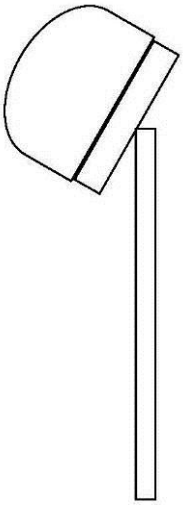
Ad. 59: Style: curvature

Observed after anthesis before dehiscence of perianth.

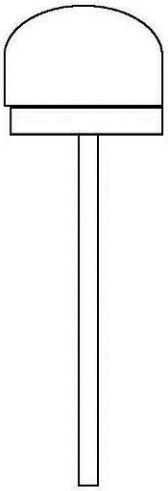
Ad. 67: Pollen presenter: attitude to style



1
lateral

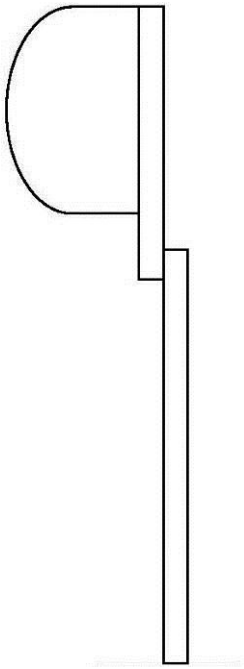


2
oblique

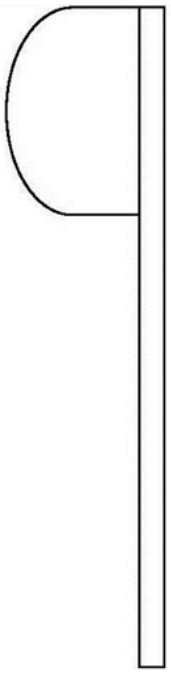


3
transverse

Ad. 68: Pollen presenter : concurrence with style



1
absent



9
present

9. Literature

McGillivray, D. J.,Makinson, R. O., 1993: Grevillea, Proteaceae : a taxonomic revision. Melbourne University Press at the Miegunyah Press, Carlton, Vic. AU, 465 pp.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1.1 Botanical name	*Grevillea* R. Br. corr. R. Br.
1.1.2 Common name	Grevillea
1.2 Species (please complete)	

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(……..……..…) x (……..……..…)
female parent male parent

(b) partially known cross [ ]
(please state known parent variety(ies))

(……..……..…) x (……..……..…)
female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(please provide details)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(c) other (state method) [ ]

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Inflorescence: predominant color*	*yellow*	*orange*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color image of the variety should accompany the Technical Questionnaire.

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a)	Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes [ ]	No [ ]
(b)	Chemical treatment (e.g. growth retardant, pesticide)	Yes [ ]	No [ ]
(c)	Tissue culture	Yes [ ]	No [ ]
(d)	Other factors	Yes [ ]	No [ ]

Please provide details for where you have indicated “yes”.

……

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]