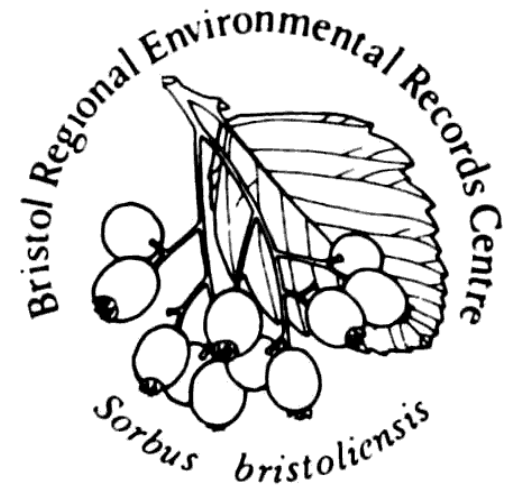


# A VEGETATIVE KEY TO GRASSES

Ellen McDouall



**START:**

LEAF BLADES: Bristle-like — Table 1 (page 1)

Flat

LIGULE: A fringe of hairs — Table 2 (page 4)

Membranous

YOUNGEST

LEAF BLADE: Folded in shoot — Table 3 (page 5)

Rolled in shoot

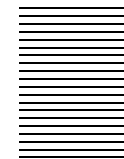
AURICLES: Present — Table 4 (page 8)

Absent

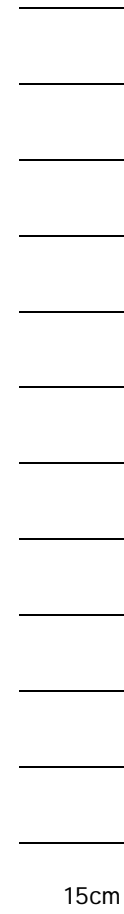
SHEATHS: Tubular, closed — Table 5  
(page 10)

Wrapped, open

Table 6 (page 11)



20m  
m



15cm

<b>32</b> (31)	Habit	rhizomatous	leaves yellowish or light green, more or less hairy, may have few prickle-like hairs on margins; calcareous grassland. <b>Tor Grass</b> <i>Brachypodium pinnatum</i>	*N
		tufted or stoloniferous		<b>33</b>
<b>33</b> (32)	Leaf blades	less than 4mm wide		<b>34</b>
		over 4mm wide		<b>35</b>
<b>34</b> (33)	Habit	loosely tufted	sheaths whitish; leaves pale green & dull below, usually flat; drier grassland. <b>Yellow Oat-grass</b> <i>Trisetum flavescens</i>	*
		compactly tufted	often small compact tufts but may grow to 40cm; ligule up to 1mm; leaves & sheaths densely - loosely hairy or downy; dry grassland. <b>Crested Hair-grass</b> <i>Koeleria macrantha</i> ( <i>K. cristata</i> )	*N
<b>35</b> (33)	Persistence	annual	annual <b>Oats</b> <i>Avena fatua</i> , <i>A. sterilis</i> & <i>A. sativa</i>	*
		perennial	in woods & shady places.	<b>36</b>
<b>36</b> (35)	Lower sheaths	shortly hairy	sheaths slightly hairy; ligules short & blunt; leaves finely veined & pale - bright green. <b>Bearded Couch</b> <i>Elymus caninus</i> ( <i>Agropyron caninum</i> )	*
		with spreading hairs	sheaths usually densely hairy; leaves narrow towards sheath; drooping & sparsely hairy. <b>False Brome</b> <i>Brachypodium sylvaticum</i>	*

NOTES: \* ----- end of line through key

(29)----- refers back to previous pair of characters in line

(*D. rigida*) - old synonym

N ----- species is notable in Avon area

AW ----- Ancient woodland Indicator Species

*Poa pratense*, *Helictotrichon pratense* and *Helictotrichon pubescens*

Study of pot-grown specimens together with several years of personal confusion over the identification of these species from vegetative characteristics, suggests that there may be very little difference between them. Young, undeveloped leaves of *H. pubescens* may be hairless or very nearly so and all show characteristic boat-shaped leaf tips, relatively thick, stiff and greyish blades with deep channels either side of the mid-rib (tramlines).

Tips are: to consider the environment - *Helictotrichon* species are found on basic soils.

*H. pratense* should have tiny white dots on the underside of the leaf.

*H. pubescens* - check very carefully for any hairs at all.

**TABLE 1 - Leaves bristle-like.**

<b>1</b>	Persistence	annual		<b>2</b>
		perennial		<b>4</b>
<b>2</b> (1)	Ligule	less than 1mm long	leaves minutely hairy, few-ribbed; 0.5-3mm wide; sheaths smooth; dry grassland, arable & waste land. <b>Annual Fescues</b> <i>Vulpia</i> spp.	*N
		up to 5mm long	leaves hairless, 0.3-0.5mm wide, keeled, folded in shoot; dry places.	<b>3</b>
<b>3</b> (2)	Sheath	minutely rough	plants tufted or solitary; leaves, thread-like, 0.5-5cm long, greyish-green; sandy places. <b>Silvery Hair-grass</b> <i>Aira caryophyllea</i>	*N
		smooth	plant delicate, in small tufts or single shoots; leaves up to 5cm long, green or reddish; sandy places. <b>Early Hair-grass</b> <i>Aira praecox</i>	*N
<b>4</b> (1)	Habitat	Coastal dunes or salt-marsh	Often a dominant or significant component of sward	<b>5</b>
		Various grasslands but not influenced by salt water		<b>7</b>
<b>5</b> (4)	Ligule	10-30mm long	compact tufts or spreading shoots; sheaths overlapping; leaves tightly inrolled & sharp-pointed; extensive rhizomes; sand dunes, common. <b>Marram grass</b> <i>Ammophila arenaria</i>	*N
		up to 4mm	may be obscure	<b>6</b>
<b>6</b> (5)	Sheaths	hairless	densely tufted or loosely spreading; rooting stolons produced in summer only. Leaves greyish to dark green, often folded or rolled. <b>Common Salt-marsh-grass</b> <i>Puccinellia maritima</i>	*N
		Hairy/ downy	plant variable; leaves minutely hairy & usually at least 2x longer than sheaths. <b>Red Fescue</b> <i>Festuca rubra</i>	*
<b>7</b> (4)	Sheath	hairy or downy		<b>8</b>
		hairless		<b>9</b>

<b>24</b> (23)	leaves	1-4mm wide, up to 15cm long	ligules 0.5-2mm long	<b>25</b>
		wider; up to 15mm; 6-40cm long		<b>26</b>
<b>25</b> (23)	Basal sheaths	streaked yellow or yellow-brown	leaves shiny on underside; plant generally tough; common in pasture. <b>Crested Dog's-tail</b> <i>Cynosurus cristatus</i>	*
		whitish	leaves pale green & dull below; drier grassland. <b>Yellow Oat-grass</b> <i>Trisetum flavescens</i>	*
<b>26</b> (24)	Ligules	3-10mm long	ligule rounded; leaves dull green & rough on margins; loosely tufted; in woods. <b>Wood Millet</b> <i>Milium effusum</i>	* AW
		up to 3mm		<b>27</b>
<b>27</b> (26)	Basal sheaths	purple-brown	ligule 1-2.5mm long; leaves bluntly ribbed & dull green; meadows. <b>Meadow Foxtail</b> <i>Alopecurus pratensis</i>	*
		green; yellow or whitish	ligules blunt 0.5-1.5mm long; leaves finely veined, pale - bright green; shady places. <b>Bearded Couch</b> <i>Elymus caninus</i> ( <i>Agropyron caninum</i> )	*
<b>28</b> (4)	Sheaths	hairless		<b>29</b>
		hairy	may only be hairy in tuft at top of sheath	<b>31</b>
<b>29</b>	Leaves	very glossy on underside	sheaths streaked yellow or yellow-brown; plant generally tough; common in pasture. <b>Crested Dog's-tail</b> <i>Cynosurus cristatus</i>	*
		dull or slightly shiny under		<b>30</b>
<b>30</b> (29)	Ligule	less than 1mm long	ligule very blunt; leaves bluish-green. <b>Sea Barley</b> <i>Hordeum marinum</i>	*N
		4-12mm long	ligule blunt & ragged; leaves dull green, rather coarse & rough; damp places including woods. <b>Wood Small-reed</b> <i>Calamagrostis epigejos</i>	*N
<b>31</b> (28)	Sheath	bearded at top	tastes of bitter almond (coumarin); otherwise variable. <b>Sweet Vernal-grass</b> <i>Anthoxanthum odoratum</i>	*
		more or less hairy but not as above.		<b>32</b>

17 (16)	Ligule	less than 1mm long	plant slender; ligule very blunt; rough on leaf veins <u>and</u> margins; salt marshes. <b>Sea Hard-grass</b> <i>Parapholis strigosa</i>	*N
		0.5-3mm long	ligule usually obvious; blunt & ragged; leaves rough only on upper surface or veins.	18
18 (16)	leaf blades	ribbed above	coastal; dry places. <b>Sea Fern-grass</b> <i>Catapodium marinum</i> ( <i>Desmazeria marina</i> )	*N
		not as above	sheaths with broad hyaline margin toward tops; dry or calcareous grassland. <b>Fern-grass</b> <i>Catapodium rigidum</i> ( <i>Desmazeria rigida</i> )	*N
19 (13)	Habit	stoloniferous		20
		tufted	may form dense tussocks or loose tufts	22
20 (19)	Leaf blades	1-2mm wide	ligule 2-4mm long & pointed; fine leafy tufts on nodes of slender stolons, often rooting; damp & wet places; usually acid. <b>Velvet Bent</b> <i>Agrostis canina</i> ( <i>A. canina canina</i> )	*N
		blades wider	ligules rounded or blunt	21
21 (19)	Sheaths	greenish or with red/purple tinge	ligule 1-6mm blunt rounded; tufts of shoots from rooting stolons; wide range of conditions (tolerates wet & shade). <b>Creeping Bent</b> <i>Agrostis stolonifera</i>	*
		whitish or waxy	ligule 2-5mm long & rounded; shoots sharply bent at lower nodes, sometimes rooting there; damp places. <b>Marsh Foxtail</b> <i>Alopecurus geniculatus</i> (also rarer <i>A. aequalis</i> )	*
22 (20)	Leaf blades	with prominent ribs & furrows	dense tussocks or small loose tufts; ligules pointed, up to 15mm long; leaves rough on ribs, 2-5mm wide & many times longer than sheath; damp woods & grassland. <b>Tufted Hair-grass</b> <i>Deschampsia caespitosa</i>	*
		not as above		23
23 (22)	Top of sheath	bearded	leaves & sheaths sparsely hairy or hairless; tastes of bitter almond (coumarin); otherwise variable. <b>Sweet Vernal-grass</b> <i>Anthoxanthum odoratum</i>	*
		not as above		24

8 (7)	Ligule	less than 0.5mm long	plant variable; leaves minutely hairy & usually at least 2x longer than sheaths. <b>Red Fescue</b> <i>Festuca rubra</i>	*
		more than 0.5mm long	often small compact tufts but may grow to 40cm; ligule up to 1mm; leaves & sheaths densely to loosely hairy or downy; dry grassland. <b>Crested Hair-grass</b> <i>Koeleria macrantha</i> ( <i>K. cristata</i> )	*N
9 (7)	Sheaths	lower sheaths stiff & shiny	densely tufted, shoots only 1-noded; blunt, short ligule; leaves sharp-pointed, stiff & tightly rolled, lower at right-angle to shoot, c.0.5mm wide. Heaths & moors. <b>Mat grass</b> <i>Nardus stricta</i>	*N
		not as above		10
10 (9)	Sheaths	closed	common in commercial grass seed mixes. <b>Chewings Fescue</b> <i>Festuca rubra</i> ssp. <i>commutata</i>	*
		open		11
11 (10)	Habit	with stolons	fine leafy tufts on nodes of slender stolons; often rooting; ligule 2-4mm long & pointed; leaves 1-2mm wide, damp & wet places, usually acid. <b>Velvet Bent</b> <i>Agrostis canina</i> ( <i>A. canina canina</i> )	*N
		no stolons		12
12 (11)	Habit	with rhizomes	may have small tufts spread along long rhizome.	13
		tufted	individual shoots may have short rhizomes, usually less than 10mm long.	14
13 (12)	Ligule	1-5mm long	densely tufted shoots from rhizomes, hairless; ligules pointed & ragged; upland grassland, common. <b>Brown Bent</b> <i>Agrostis vinealis</i> ( <i>Agrostis canina</i> ssp. <i>montana</i> )	*N
		less than 1mm long	small compact tufts; lower sheaths keeled; ligules rounded, the lower very short; leaves bluntly keeled; dry & calcareous grassland. <b>Narrow-leaved Meadow-grass</b> <i>Poa angustifolia</i>	*N
14 (12)	Ligules	sharp, pointed	2-8mm long	15
		blunt or obscure		16

15 (14)	Leaf blades	more than 0.3mm wide	dense tussocks or small loose tufts; ligules blunt, 0.5-3mm long; leaves hairless, inrolled, 0.3-0.8mm wide and up to 20cm+ long; sheaths upwardly rough; acid woods & grassland. <b>Wavy Hair-grass</b> <i>Deschampsia flexuosa</i>	*
		less than 0.3mm wide	densely tufted or turf-forming; leaves bristle-like, hairless; sheaths fall away from stalk easily, lower straw-coloured; ligules 2-4mm long, pointed; dry acid grassland (S & W Britain) <b>Bristle Bent</b> <i>Agrostis curtisii</i> ( <i>A. setacea</i> )	*
16 (14)	Leaf blades	0.3 - 0.6mm wide	densely tufted or turf-forming; leaves tightly inrolled with 5-7 veins; sheaths open with rounded auricles; ligules very short; poor, dry grassland. <b>Sheep's-fescue</b> <i>Festuca ovina</i>	*
		0.2 - 0.4mm wide	as above but not turf-forming; leaves mostly with 5 veins; tolerates shade & damp. <b>Fine-leaved Sheep's-Fescue</b> <i>Festuca filiformis</i> ( <i>F. tenuifolia</i> )	*

9 (8)	Leaves	with cross-veins	leaves green or whitish-green. <b>Reed Canary-grass</b> <i>Phalaris arundinacea</i>	*
		no cross-veins	leaves dull green; also in woodland. <b>Wood Small-reed</b> <i>Calamagrostis epejos</i>	*
10 (8)	Ligules	wider than long		11
		longer or as long as wide		12
11 (10)	Leaf blades	usually under 2x length of sheath	leaves medium to dark green; common on dry or poor grassland. <b>Common Bent</b> <i>Agrostis capillaris</i> ( <i>Agrostis tenuis</i> )	*
		usually over 2x length of sheath	leaves yellowish or light green, more or less hairy, may have few prickly-like hairs on margins; calcareous grassland. <b>Tor Grass</b> <i>Brachypodium pinnatum</i>	*N
12 (10)	Leaf blades	1-2mm wide	leaves often inrolled; sometimes bristle-like; ligule more or less pointed & ragged; often in dry upland areas. <b>Brown Bent</b> <i>Agrostis vinealis</i> ( <i>A. canina</i> ssp. <i>montana</i> )	*N
		up to 8mm wide	leaves flat; ligules very blunt & toothed ; 2-6mm long; woods; rough grassland & waste places. <b>Black Bent</b> <i>Agrostis gigantea</i>	*
13 (7)	Persistence	annual or biennial		14
		perennial		19
14 (13)	Leaves	smooth above		15
		rough above	may also be rough on lower side.	16
15 (14)	Ligule	1-7mm long	ligule pointed; leaves whitish- or pale green; sheaths smooth, upper ones slightly inflated; sand dunes. <b>Sand Cat's-tail</b> <i>Phleum arenarium</i>	*N
		less than 1mm long	ligule very blunt; leaves bluish-green. <b>Sea Barley</b> <i>Hordeum marinum</i>	*N
16 (14)	Leaf blades	up to 15mm wide; 25cm or more long	leaves fine-ribbed & may be rough on both sides; upper sheaths slightly inflated; ligule 2-5mm long, rounded & toothed; arable & waste places. <b>Black-grass</b> <i>Alopecurus myosuroides</i>	*
		0.5-3.5mm wide 1-10cm long		17

**TABLE 6 - Leaves flat; ligule membranous; youngest leaf rolled in shoot; no auricles; leaf sheaths open.**

<b>1</b>	Leaf blades	close-ribbed, usually inrolled	dune plants	<b>2</b>
		not as above	may be inrolled when dry but not dune plants.	<b>3</b>
<b>2</b> (1)	Ligule	0.5-1mm	wiry rhizomes; leaves spreading or drooping. <b>Sand Couch</b> <i>Elytrigia juncea</i> ssp. <i>boreoatlantica</i> ( <i>Agropyron junceiforme</i> ; <i>Elymus farctus</i> )	*N
		10-30mm	compact tufts or spreading shoots; sheaths overlapping; leaves tightly inrolled & sharp-pointed; sand dunes, common. <b>Marram grass</b> <i>Ammophila arenaria</i>	*N
<b>3</b> (1)	Roots & lower sheaths	orange-yellow to yellow-brown (lower sheaths may be dark red)	ligules 1-3mm & blunt; sheaths hairless or rarely downy; leaves bitter tasting, rough, usually with sparse hairs on upper surface; nodes often hairy; common in rough grassland. <b>False Oat-grass</b> <i>Arrhenatherum elatius</i>	*
		roots not yellowish		<b>4</b>
<b>4</b> (3)	Leaf blades	hairless or minutely hairy		<b>5</b>
		hairy		<b>28</b>
<b>5</b> (4)	Shoot base	bulbous	<b>Phleums</b> (species difficult to separate)	<b>6</b>
		not bulbous		<b>7</b>
<b>6</b> (5)	Leaf blades	3-12cm long	leaves 2-4mm wide; ligules c. 2mm long; upper sheaths slightly inflated; dry & old grassland. <b>Smaller Cat's-tail</b> <i>Phleum bertolonii</i>	*
		up to 45cm	leaves 3-9mm wide; ligules 1-4mm long; often in sown pasture. <b>Timothy</b> <i>Phleum pratense</i>	*
<b>7</b> (5)	Rhizomes	present		<b>8</b>
		absent	may have stolons.	<b>13</b>
<b>8</b> (7)	Habitat	wet and marshy places	tall, stout plants.	<b>9</b>
		grassland not permanently wet		<b>10</b>

**TABLE 2 - Leaves flat; ligule a fringe of hairs; no auricles.**

<b>1</b>	Leaf blades	10-30mm wide	plant large & reed-like; rhizomatous; ditches & marshes, often in extensive single-species stands. <b>Common Reed</b> <i>Phragmites australis</i>	*
		up to 15mm wide		<b>2</b>
<b>2</b> (1)	Youngest leaf	folded in shoot	tufted with spreading shoots; leaves 2-4mm wide, may be inrolled, blunt & abruptly pointed; moors, heaths & calcareous grassland. <b>Heath-grass</b> <i>Danthonia decumbens</i> ( <i>Sieglingia decumbens</i> )	*N
		rolled in shoot		<b>3</b>
<b>3</b> (2)	Leaf blades	upper surface smooth	forming large tussocks, very variable in size and colour, 10-120cm high, tough-rooted; shoots broaden towards base; leaves & sheaths more or less hairy, generally with few long hairs at base of blade, leaves long-pointed; wet moors & fens. <b>Purple Moor-grass</b> <i>Molinia caerulea</i>	*N
		upper surface ribbed	Rhizomatous perennials; saltmarshes. <b>Cord-grasses</b> <i>Spartina</i>	<b>4</b>
<b>4</b> (3)	Ligule hairs	0.2 - 0.6mm long	<b>Small Cord-grass</b> <i>Spartina maritima</i>	*
		1 - 2mm long	<b>Townsend's Cord-grass</b> <i>Spartina x townsendii</i>	*N
		2 - 3mm long	<b>Common Cord-grass</b> <i>Spartina anglica</i>	*N

**TABLE 3 - Leaves flat; ligule membranous; youngest leaf folded in shoot.**

1	Lower sheaths	hairy		2
		hairless	or only minutely hairy.	4
2 (1)	Leaf blades	2mm wide or less	often small compact tufts but may grow to 40cm; ligule up to 1mm; leaves & sheaths densely - loosely hairy or downy; dry grassland. <b>Crested Hair-grass</b> <i>Koeleria macrantha</i> ( <i>K. cristata</i> )	*N
		more than 2mm wide		3
3 (2)	Leaf blades	with regularly spaced hairs on margins	tufted perennial becoming "woody" at base; ligule up to 3mm; calcareous grassland. <b>Upright Brome</b> <i>Bromopsis erectus</i>	*
		softly hairy or hairless	creeping perennial; ligule pointed, up to 5mm; blades long with parallel sides; calcareous & dry grassland. <b>Hairy Oat-grass</b> <i>Helictotrichon pubescens</i> ( <i>Avenula pubescens</i> )	*
4 (1)	Auricles	present (may be very reduced)	underside of leaves shiny; some crimson colouring in lower living sheaths; common. <b>Perennial rye-grass</b> <i>Lolium perenne</i>	*
		absent		5
5 (4)	Basal sheaths	living sheath streaked yellow	underside of leaf leaves shiny but sheaths never crimson; plant generally tough; common in pasture. <b>Crested Dog's-tail</b> <i>Cynosurus cristatus</i>	*
		not as above	living sheaths streaked white; green or purple.	6
6 (5)	Lower sheaths	rounded		7
		flattened/keeled		11
7 (6)	Leaf blades	dark; conspicuously grooved, ribbed and rough	dense tussocks or small loose tufts; ligules pointed, up to 15mm; leaves rough on ribs, 2-5mm wide & many times longer than sheath; damp woods & grassland. <b>Tufted Hair-grass</b> <i>Deschampsia caespitosa</i>	*
		not as above		8
8 (7)	Leaf blades	blue-green above; green below		9
		blue-green on both sides	saltmarsh plants	10

**TABLE 5 - Leaves flat; ligule membranous; youngest leaf rolled in shoot; no auricles; leaf sheaths closed.**

1	Sheath	with bristle opposite leaf base	rhizomatous; lowest sheaths deep purple; bristle absent from lowest sheaths in spring. <b>Wood Melick</b> <i>Melica uniflora</i>	*
		no bristle at top of sheath		A W 2
2 (1)	Sheaths	hairless		3
		with at least some hairs		7
3 (2)	Persistence	annual or biennial	loosely tufted or solitary; lower sheaths hairless or obscurely hairy. Arable & waste ground. <b>Rye Brome</b> <i>Bromus secalinus</i>	*
		perennial		4
4 (3)	Leaf blades	very glossy on underside	sheaths streaked yellow or yellow-brown; plant generally tough; common in pasture. <b>Crested Dog's-tail</b> <i>Cynosurus cristatus</i>	*
		dull on underside		5
5 (4)	Ligule	2-6mm, toothed	leaves flat; ligules long, very blunt & toothed; woods, rough grassland & waste places. <b>Black Bent</b> <i>Agrostis gigantea</i>	*
		very short & blunt		7
6 (5)	Lower sheaths	purple, turning brown	plant tufted or with rhizomes; hairless; sheath may appear open; short flat ligules. <b>Meadow Foxtail</b> <i>Alopecurus pratensis</i>	*
		white, turning yellow/brown	leaves tend to twist & with slight constriction c.1cm from tip; ligule short; drier grassland. <b>Quaking-grass</b> <i>Briza media</i>	*
7 (2)	Habit	rhizomatous	shoots often trailing; <u>downward-pointing hairs on nodes</u> , otherwise more or less hairy; shady places & arable. <b>Creeping Soft-grass</b> <i>Holcus mollis</i>	*
		tufted		8
8 (7)	Persistence	perennial	whole plant soft and downy; rarely hairless; lower sheaths usually striped pink/purple. <b>Yorkshire Fog</b> <i>Holcus lanatus</i>	*
		annual	sheaths softly hairy; leaves more or less so. ligules 1-4mm & ragged. <b>Annual Bromes</b> <i>Bromus</i> spp.	*



<b>8</b> (7)	Ligule	less than 1mm long	only lower sheaths hairy; leaves more or less so; leaves held at right-angles to stalk on mature plants; grey-green; damp grassland. <b>Meadow Barley</b> <i>Hordeum secalinum</i>	*
		1-3mm long	very similar to Hairy-brome (6) but hairs shorter & leaves shortly hairy to hairless; woodland; rare. <b>Lesser Hairy-brome</b> <i>Bromopsis benekenii</i> ( <i>Bromus benekenii</i> )	*N
<b>9</b> (4)	Auricles	inconspicuous	ligule very blunt; leaves bluish-green; coastal. <b>Sea Barley</b> <i>Hordeum marinum</i>	*N
		obvious		<b>10</b>
<b>10</b> (9)	Persistence	annual		<b>11</b>
		perennial	conspicuous auricles	<b>12</b>
<b>11</b> (10)	Leaves	very glossy on underside	shoots tufted or single; tending to be stout. <b>Italian Rye-grass</b> <i>Lolium multiflorum</i>	*
		dull on underside	well-developed narrow auricles; loosely hairy to hairless; upper sheaths inflated; light green & rather weak growth; arable & waste places. <b>Wall Barley</b> <i>Hordeum murinum</i> (Rye & Barley also key out here)	*
<b>12</b> (9)	Auricles	fine pointed and uneven; hairless	ligule about 1mm; underside of leaf glossy; rough on margins & upper side; damp grassland. <b>Meadow Fescue</b> <i>Festuca pratensis</i>	*
		fringed with hairs	ligule up to 2mm; underside of leaves rough; fairly stout; damp or drier calcareous grassland. <b>Tall Fescue</b> <i>Festuca arundinacea</i>	*
		broad & long	auricles often striped & may wrap around stem; red/purple colouring at nodes; auricles &/or lower sheaths; plant stout; shady places. <b>Giant Fescue</b> <i>Festuca gigantea</i>	*

<b>9</b> (8)	Leaf blades	leaves dotted white on underside (use lens)	leaves stiff, hooded at tip, ligule pointed; tufted perennial; calcareous grassland. <b>Meadow Oat-grass</b> <i>Helictotrichon pratense</i> ( <i>Avenula pratensis</i> )	*N
		green on underside	variable but leaves usually hairless, dull green, thick & stiff with groove either side of mid-rib; ligule obscure; rhizomatous. <b>Smooth Meadow-grass</b> <i>Poa pratensis</i>	*
<b>10</b> (8)	Stolons	present	densely tufted or loosely spreading; rooting stolons produced in summer only. Leaves greyish to dark green, often folded. <b>Common Salt-marsh-grass</b> <i>Puccinellia maritima</i>	*N
		absent	tufted; leaves greyish or whitish-green, flat. <b>Reflexed Salt-marsh-grass</b> <i>Puccinellia distans</i> (also 3 other rare species + hybrids)	*N
<b>11</b> (6)	Leaf blades	have cross-veins and air cavities	fresh water plants.	<b>12</b>
		no cross-veins and air cavities	rarely if ever growing <u>in</u> water.	<b>16</b>
<b>12</b> (11)	Sheaths	tubular; closed	leaves parallel-sided, not tapering; sweet-tasting; stoloniferous; wet places. <b>Whorl-grass</b> <i>Catabrosa aquatica</i>	*N
		open		<b>13</b>
<b>13</b> (12)	Ligules	short but with clearly pointed central tooth	tall and stout up to 2.5 m high. <b>Reed Sweet-grass</b> <i>Glyceria maxima</i>	*N
		medium-long, becoming split		<b>14</b>
<b>14</b> (13)	Sheaths	minutely hairy or rough at top	leaves tapering gradually; rough or minutely hairy; ligule blunt, 2-9mm long. <b>Plicate Sweet-grass</b> <i>Glyceria plicata</i>	*
		smooth		<b>15</b>
<b>15</b> (14)	Leaf blades	tapering at tip	leaf-tip pointed; rough on margins only; ligule 5-15mm long & pointed. <b>Floating Sweet-grass</b> <i>Glyceria fluitans</i>	*
		blunt at tip	leaf tip mucronate (with fine hair-like point); leaves short & glaucous-grey; ligule 4-9mm long, pointed. <b>Small Sweet-grass</b> <i>Glyceria declinata</i>	*N

16 (11)	Ligule	very short with a hairy fringe	densely tufted; leaves glaucous with rough edges, tip blunt but mucronate. <b>Blue-Moor-grass</b> <i>Sesleria caerulea</i> ( <i>S. albicans</i> )	*
		varying length but not hairy		17
17 (16)	Shoot base	broad & waxy-white at base	mature shoots decumbent at base & strongly flattened; ligule also keeled; common. <b>Cock's-foot</b> <i>Dactylis glomerata</i>	*
		flattened but not waxy-white		18
18 (17)	Habit	rhizomatous	may still grow in tufts along rhizomes - dig!	19
		tufted	may have stolons	21
19 (18)	Ligule	1mm or more long	leaves stiff; greyish green; no more than 2x longer than sheath; stem oval in X-section† . <b>Flattened Meadow-grass</b> <i>Poa compressa</i>	*N
		less than 1mm long		20
20 (19)	Lower sheaths	strongly keeled; woodlands	tufted with short rhizomes; very flattened shoots with weak pale green leaves; ligule less than 0.5mm or absent. <b>Wood Meadow-grass</b> <i>Poa nemoralis</i>	*
		rounded; grassland	rhizomatous; ligule obscure; variable but leaves usually hairless, dull green, with groove either side of mid-rib; neutral grassland. <b>Smooth Meadow-grass</b> <i>Poa pratensis</i>	*
21 (18)	Ligule	very short (to 0.5mm) or absent	tufted; very flattened shoots with weak pale green leaves; woodlands. <b>Wood Meadow-grass</b> <i>Poa nemoralis</i>	*
		more than 1mm long		22
22 (21)	Persistence	perennial	sparsely tufted with leafy stolons;; upper sheaths rough; range of habitats (tolerates wet & shade). <b>Rough Meadow-grass</b> <i>Poa trivialis</i>	*
		annual or biennial	tufted (individuals present all year); sheaths keeled & smooth; ligule never more than 5mm long. <b>Annual Meadow-grass</b> <i>Poa annua</i>	*

also up to ten rarer species & sub-species of Meadow-grass.

† strip all leaf-sheaths away to determine the stem shape near the base.

**TABLE 4 - Leaves flat; ligule membranous; youngest leaf rolled in shoot; with auricles.**

1	Habit	rhizomatous		2
		tufted	loosely to densely tufted	4
2 (1)	Habitat	grassland; arable & waste places	very short blunt ligules; long fine auricles; plant loosely to sparsely hairy. <b>Couch</b> <i>Elytrigia repens</i> ( <i>Agropyron repens</i> , <i>Elymus repens</i> )	*
		maritime	salt marsh, shingle & sand dunes, leaves strongly ribbed.	3
3 (2)	Leaf blades	2-9mm wide	leaves usually inrolled with crowded flat-topped & minutely rough ribs. <b>Sea Couch</b> <i>Elytrigia atherica</i> ( <i>Elymus athericus</i> , <i>E. pungens</i> , <i>E. pyncnanthus</i> , <i>Agropyron pungens</i> , <i>A. pynanthum</i> )	*N
		8-20mm wide	leaves flat; becoming inrolled; very broad & sharp-tipped; ligules minutely hairy. <b>Lyme-grass</b> <i>Leymus arenarius</i> ( <i>Elymus arenarius</i> , <i>Agropyron arenarius</i> )	*N
4 (2)	Sheaths	hairy		5
		hairless		9
5 (4)	Hairs	wide & spreading	in woods & shady places	6
		short & downy		7
6 (5)	Ligule	less than 1mm long	more or less loosely hairy & hairy at stem nodes; preferring lime. <b>Wood Barley</b> <i>Hordelymus europaeus</i>	*
		up to 6mm long	ligule rounded; narrow pointed auricles; long down-pointing hairs; may have very short rhizomes. <b>Hairy-brome</b> <i>Bromopsis ramosa</i> ( <i>B. ramosus</i> ; <i>Zerna ramosa</i> )	* A W
7 (5)	Persistence	annual	well-developed auricles; loosely hairy to hairless; light green & weak growth; arable & waste places. <b>Wall Barley</b> <i>Hordeum murinum</i> (Wheat & Barley also key out here)	*
		perennial		8