

Return to Slender

Slender speedwell is the word, as Dr Terry Mabbett returns to front this month's L&D Feature

Brooklime is commonly found as a water margin plant around ponds and along brooks

There are over 20 different speedwells native or naturalised in the UK but slender speedwell (*Veronica filiformis*) is the only one found growing as a weed in well formed and tightly knit professional sports turf. Slender speedwell as the name suggests is one of the 'puniest' speedwells but more than makes up for lack of stature by being one of the 'worst' weeds in turf.

Slender speedwell along with field woodrush was given the dubious honour of being the most stubborn and difficult to manage weed of sports turf. Bayer Environmental Science conducted a survey by questionnaire at Saltex 2004 to find out which weeds were regarded as the most difficult to control. Slender speedwell came out top of for stubbornness with 33% of respondents identifying the weed as the most difficult to control on their 'patch'.

A well travelled weed

Veronica filiformis is a garden plant introduction that must have seemed like a good idea at the time

in the early 19th century. It was originally introduced from the Caucasus in 1808 as a 'Georgian rock gardener's delight' but subsequently found a more favourable and fruitful habitat in grassland. Slender speedwell was already well established as a garden plant in 1830 when the cylinder mower was invented. Eight years later saw first reports of slender speedwell escaping from rock gardens into the wider world of turf.

Turf was clearly 'on a roll' following invention of the cylinder mower by Edwin Budding and on sale two years later at Ransomes. The 'Collins Wild Flower Guide' describes slender speedwell with its pretty blue/mauve flowers as 'a worthy addition to our flora' but the green-keeper and groundsman would disagree seeing slender speedwell as a pernicious weed of fine turf.

Slender speedwell is not the sort of plant you notice unless you are really looking for it, especially in the cold light of January when plants make their first new-year appearance as a small 'dormant' matt growth with tiny leaves. In March they are on the move and by late April the slender stems are sliding

through the turf and bearing flowers.

Slender speedwell is certainly obscure compared with most other speedwells, especially the bushier and larger-leaved germander (birds-eye) speedwell. Germander speedwell (*Veronica chamaedrys*) and other species like thyme speedwell (*Veronica serpyllifolia*) are as nuisance weeds of turf, but generally amenity turf or recently seeded fine turf disappearing quickly once regular closer cut mowing begins.

But mowing has little effect on slender speedwell which sneaks through the turf at ground level via long, slender, creeping stems eventually consolidating into relatively large patches of stubborn weed growth. Slender speedwell is one of the most deceptively damaging of weeds of sports turf and mowing can actually make it worse.

A die-hard weed

There is no doubt that slender speedwell is one of the hardest weeds to control and along with Field Woodrush is the most resistant to selective herbicides in general used on managed turf. Unlike



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Slender speedwell in the cold light of January is a small and static matt of foliage



Slender speedwell on the move in March



Slender speedwell in late April with slender stems moving quickly through turf rooting as they go. Plants already in flower



Thyme speedwell in amenity turf



Germander (Bird's eye) speedwell in amenity turf



Close up on brooklime

Field Woodrush which is essentially confined to low fertility acid reaction soils, slender speedwell is not that fussy about soil conditions and tends to crop up anywhere and everywhere in turf.

Botanically speaking slender speedwell is a downy, low-growing and matt-forming perennial with small blunt-toothed, kidney shaped leaves carried on short stalks either in pairs or alternately. The mauve-blue flowers borne on long thread-like stalks are relatively large given the diminutive foliage and only appear within a relatively narrow 6-week window of flowering from late April to June.

In spite of its exotic plant status and original rock garden niche this fast spreading garden escape took to its 'new' turf home with relish and gusto, but not in every respect because *Veronica filiformis* rarely sets fruit or viable seed in the United Kingdom. Outside of the turf grass environment the weed is

or a completely different course in a contractor's mowing schedule.

If a student of botany were to research the historical development of slender speedwell as a turf weed they would almost certainly find it was closely tied to birth and growth of mowing including the spread of contract grass cutting services.

Few herbicides for control

Before reaching for the bottle [of herbicide] there are basic things to do that will help suppress and contain this pernicious weed. Always box clippings and destroy them if you think they contain pieces of slender speedwell. Try to avoid lending out or borrowing mowers and always clean machinery thoroughly before moving on to a new site. Slender speedwell can be checked by applications of lawn sand in spring, the iron (ferrous sulphate) component burning off the leaves but it will not kill the plants.

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rather localised and found mainly by riverbanks, in churchyards and other damp places.

Sexual reproduction is clearly not the secret of slender speedwell's success in UK turf and unlike more widespread and highly fecund wayside weeds such as dandelion, clovers and plantains there is no seed bank outside. But every 'dog has its day', and slender speedwell is no exception. Plants have an ultra efficient means of asexual or vegetative reproduction unwittingly assisted by greenkeepers mowing without a box. This mode of spread in which pieces of slender speedwell stem 'hitch a ride' on mower blades has underpinned its success as a well-travelled turf weed.

The long, creeping prostrate stems root at regular intervals (the nodes) to produce new plants which collectively form a large matt of weed growth. Pieces of stem excised during mowing root readily where they fall. This can be on the same site or miles away, because pieces of stem become attached to the mower and are carried on to the next hole on the same course

When you finally go to use herbicide make sure you choose the right one because slender speedwell is notoriously resistant to many herbicides. There has always been a dearth of herbicide actives capable of killing this particular weed at standard label dosage rates and application frequencies. The target weed lists of most turf herbicides will contain notoriously difficult to control turf weeds like self-heal, yarrow and clovers but often make no mention of slender speedwell.

Look down the target weed 'hit list' for an unequivocal statement about control of slender speedwell. Make sure the label specifies slender speedwell as opposed to speedwells in general and beware of comments like 'moderate control only'. The 'old' auxin-type (hormonal) herbicides such as 2,4-D and MCPA will do little if anything against slender speedwell but there are newer actives with the same hormonal mode of action that will.

The one with the most proven pedigree is fluroxypyr and by looking for products which contain this herbicide active is probably the

best starting point for controlling slender speedwell. Virtually all products containing fluroxypyr will contain other actives as well. The will invariably have a completely different mode of action and may well augment control provided by fluroxypyr.

Spray timing against slender speedwell appears to be critical and is recommended within a relatively short window amounting to weeks. As an already difficult to control weed application too early in the year when the ground is still cold, and neither weeds nor grass is actively growing, is not advised. Applications made after slender speedwell's main flowering period in May are considered as too late.

Sorting out the speedwells

There are around two dozen speedwells in various environments across the UK but the speedwell situation for greenkeepers shouldn't be too difficult to sort out. All speedwell flowers have a common structure (short tube with four petal like lobes) and are all basically blue though with different shades and patterns. The botanist might be comfortable about differentiating species on exact flower size, structure and colour but others will clearly not. Moreover the greenkeeper may not see slender speedwell in flower, because although low cut mowing will not remove the weed it will almost certainly stop it from flowering in profusion.

A far better way to recognise slender speedwell in turf is by its slender creeping stems and distinctive leaf shape – kidney shaped when young and becoming more rounded with age. Indeed an alternative though much less frequently used common name for *Veronica filiformis* is 'round leaved speedwell'. German speedwell and thyme speedwell which are not uncommon in amenity turf are much more upright plants with flowers borne on spikes rather than single stalks.

The speedwell most frequently encountered in general is common field speedwell (*Veronica persica*) a lover of recently disturbed ground and almost certainly present in flower beds around the clubhouse. It may be accompanied by ivy speedwell (*Veronica hederifolia*), so called because of its ivy-like leaf shape. Of passing interest is 'brooklime' (*Veronica beccabunga*) very common in muddy areas around ponds and along brooks. The leaves were apparently used centuries ago as a cure for scurvy (Vitamin C deficiency).