



Mosses in English literature, part 5:

- ▲ *Schistostega pennata* in Church Cave, Alderley Edge, Cheshire (view into cave).
- ▶ Close-up of *S. pennata* in Church Cave, Alderley Edge, Cheshire. The normal leafy moss plants can be seen growing from the shining protonema.

Photos S. Edwards

Cameron, James F. (1954–). *Avatar* (2009), 20th Century Fox.

This is non-verbal, but well worth including as a ‘visual quotation’ in a modern blockbuster film. It is important because it shows moss as part of the magic and awe of the natural world that humans do not respect.

In the film, the ground and horizontal boughs in the forest on the planet Pandora are carpeted with mosses, which at night briefly pulse a bioluminescent green when trodden on. The plants are not named in the film, but a new/additional



‘Luminous Moss’

This is the fifth part of **Sean Edwards’** occasional column in *Field Bryology* that looks at how bryophytes are perceived by the general public. This supplement was triggered by the film *Avatar*, which links with Morton’s goblin gold, although both of these are more ‘popular culture’ than literature. Takeda, hardly ‘English’ literature, completes this odd trilogy on this fabled moss.

scene (scene 60 in the extended cut scenes) is entitled ‘*Purple Moss*’ and shows a purple variant of the same thing. It is not known whether the luminous moss was influenced by any knowledge of refractive cryptogams such as *Schistostega pennata*, known as ‘Luminous Moss’ since 1900, and no doubt long before.

Avatar has parallels with Brian Jacques’ *Mossflower* (Jacques, 1988), Bill Kroyer’s *FernGully: the Last Rainforest* (Kroyer, 1992) and other works concerned with ecological romanticism (Edwards, 1992).

Morton, J.B. (1893–1979). *The Hobgoblin of Rantipole Wood*. Undated (possibly 1930s or 1940s). In *The Favourite Wonder Book*, Odhams Press.

‘And it was lucky for him that he accepted, for when he arrived home that night, and went to count the [gold pieces] the hobgoblin had given his son, he found in each bag nothing but withered leaves.’

Brian T. Parks sent (in litt. 2005) the Morton story, regarding *S. pennata* and asked: ‘... is this the origin of the gold which turns to dust or

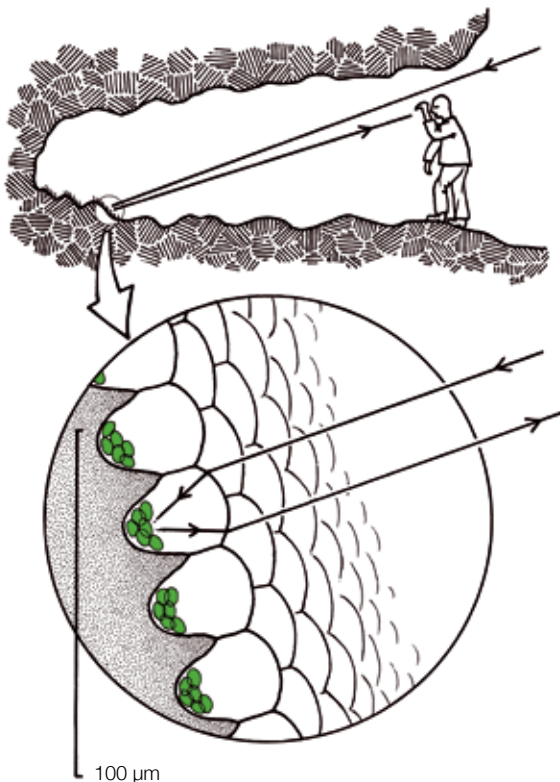
dry leaves found so often in European fairy tales?
 There are endless references on the web to fairy gold that turns to dust or dry leaves in daylight, but no early published source material of such a fairy tale has been found. The first found association (Edwards, 1997) of 'Goblin Gold' with *Schistostega* was in 1903 by Grout. He calls it 'Luminous Moss' and observes '*This beautiful plant is probably the reality upon which are based the fairy tales of goblin gold.*'

The cave-dwelling, shining, emerald green cells were described as an alga (*Catoptridium smaragdinum*) by Bridel in 1827, but were later shown to be the protonema of the moss *S. pennata*, which had been described earlier by Mohr in 1803.

Its English names 'Luminous Moss' and 'Goblin Gold' result from this characteristic. So

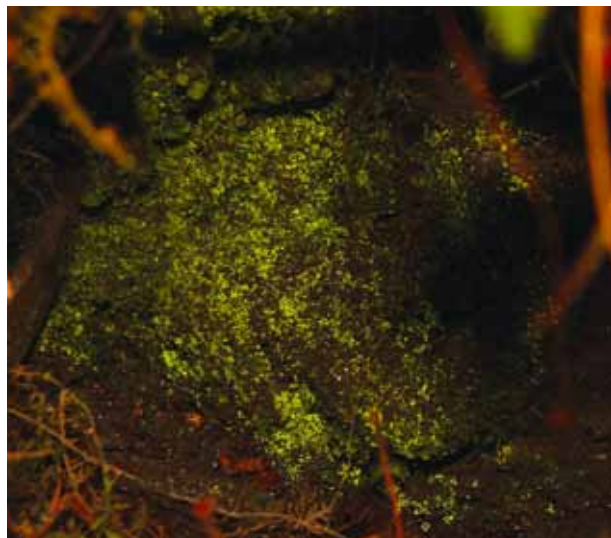
noticeable is the glow that people have (allegedly) tried to grasp the glitter only to find it vanishes when taken into the light. Or just go in to find it, and there is nothing there but a sparsely mossy wall. This is because the effect, like cats-eyes, only works when your eyes are close to a narrow source of light, as when looking down a hole. Out in the open, in omnidirectional light, the treasure is magicked away leaving only dingy brown-green earth. All that glisters is not gold.

The name 'Emerald Lightbender' is a direct translation of *Catoptridium smaragdinum*, and refers to the highly refractive protonemal cells that produce the luminous emerald shining in caves and holes. It was suggested to me by Prof. Peter Herring (in litt. 1994) as a good name for a cocktail!



◀ The mechanism behind the luminescence of *S. pennata*. Light focussed on the chloroplasts at the back of the pear-shaped protonemal cells (see magnified inset), is refracted back out along the same path. *S. Edwards*

▼ *S. pennata* at the bottom of a hole in a grass bank in Minster churchyard, Boscastle, Cornwall. *I. Atherton*



Takeda, Taijun (1912–1976). *Luminous Moss* (1954 as *Hikarigoke*, transl. 1967 by Y. Shibuya & S. Goldstein). In *This Outcast Generation, and Luminous Moss*. Library of Japanese Literature, Charles E. Tuttle Co., USA

This is a novelette with an embedded play set in 1945 on the subject of cannibalism after a shipwreck, not as macabre as might be expected. It is set largely in the World Cultural and Natural Heritage (UNESCO) site: the Hikarigoke Cave, in Rausu, Hokkaido, Japan. *Hikarigoke* translates as luminous moss. This cave now has a roped-off walking path to guide visitors through the natural site, famous for *S. pennata*. The five out-of-context extracts below can only give a hint of the story. Moss here is associated with death, but in a mystical, sacred way, quite different from the usual English connection via tombstones or decay. Hardly surprisingly, this is the only association I have found between moss and cannibalism!

‘When someone else pointed to it, you couldn’t find the moss glowing, but if you looked about casually, you might discover a pinpoint of light, like the color of some precious rug, suddenly appear from one of the golden green sparks. So faint was the light, you were moved by the realization that light could be so small, so reserved, so crystal sharp. Instead of describing the glow of the moss as golden green, it would be more accurate to say that somehow the golden green moss was transformed into light itself. The light was not shining on the moss. It was steeping itself into the very essence of the moss. I felt as if the moss were trying to absorb the light into itself rather than to shed it.’

‘Nishikawa draws back little by little, facing Hachizo. By and by, a ring of light, like the halo of the figure of Buddha, is seen behind his neck, beaming a golden green light.’

‘No. They say – an’ it’s handed down from way back – that a man that’s ate a man’s flesh has a ring of light come out from behind his neck. A golden green light. A ring a pale, pale light comes out. Anyway, they say it looks like somethin’ called luminous moss.’

‘No, I didn’t [see it]. It ain’t everybody can see that ring a light just anywhere. Only certain people, when they look in a certain direction, can see it just for a second.’

‘As Nishikawa exits, the sound of the [sacred Ainu] music rises. As it is rising, the light of the fire diminishes. When the music reaches its greatest volume, the fire fades completely. At that moment, all the luminous moss in the cave beams forth its light, the profound and exquisite hue of golden green flooding the stage.’

Further quotations

Although I now have a large quarry of unused quotations, I should still like members to send in anything of particular interest. If quotations you have sent in already have not been used, they hopefully will be as they form groups. The criteria are the same as for Edwards (1992). Parts 1–4 of this series can be found in vols 61, 62, 65, 72 (1993, 1993, 1995, 1999, respectively) of the *Bulletin*. Please send any quotations (with as full references as possible) to: Sean Edwards, Vine Cottage, The Street, Thursley, Surrey GU8 6QE, UK (e sean.r.edwards@btinternet.com).

References

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