

Will the real *Fuscoboletinus weaverae* please stand up?

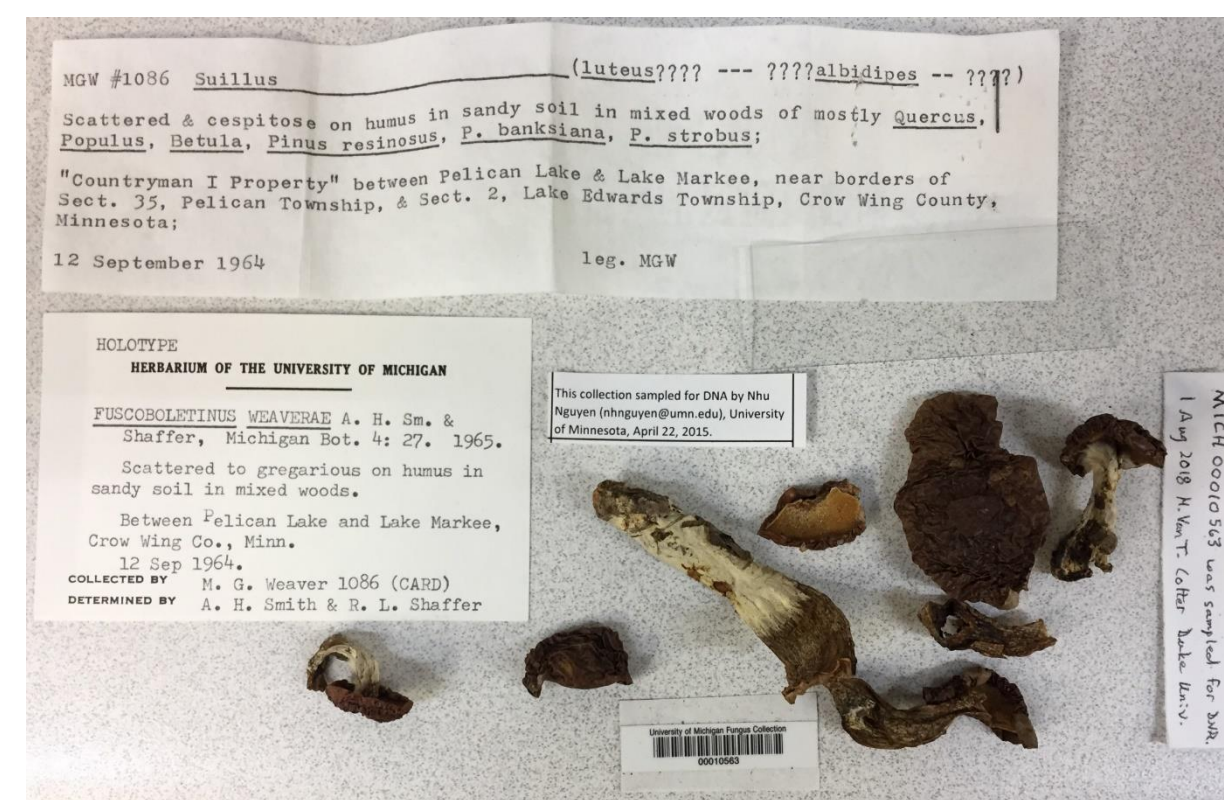
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Three Dueling Concepts

Concept 1

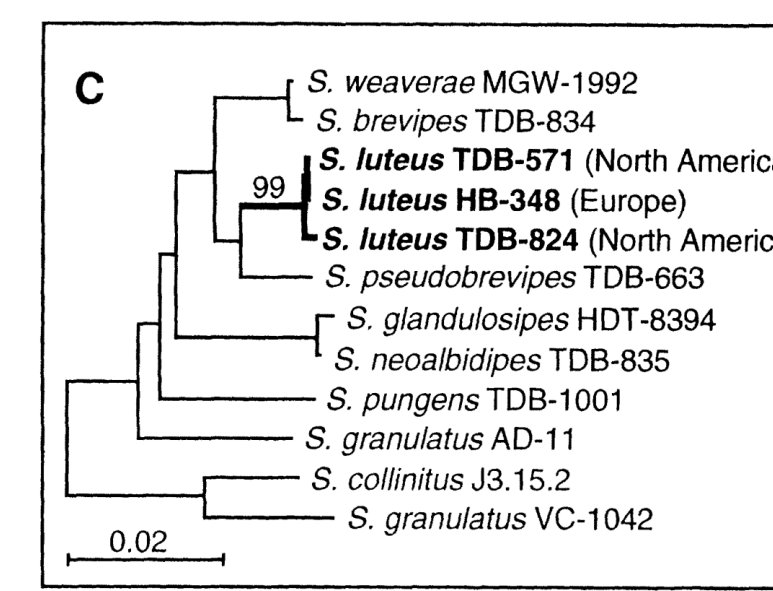
Original Description by Smith and Shaffer 1965
A rare Bolete species known only from the type locality in Minnesota, listed as endangered.



Concept 2

Kretzer *et al.* 1996
Suillus cf. brevipes

Based on the ITS region of the topotype collection.

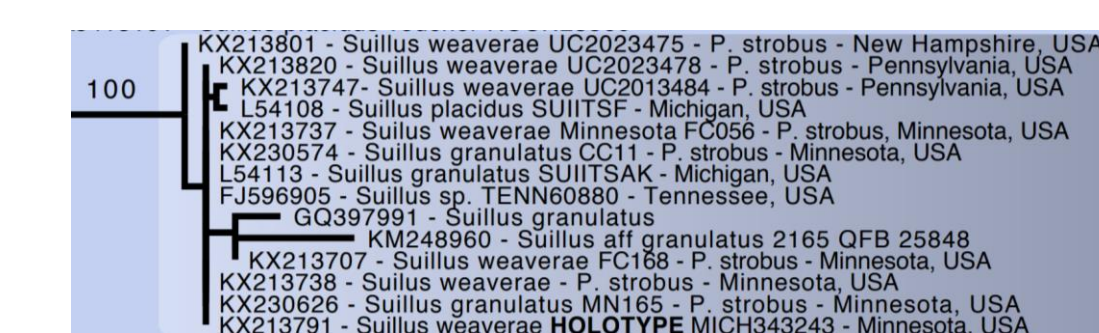


Concept 3

2016, Nguyen *et al.* 2016.

The *Suillus* species associated with *Pinus strobus* known under the European name of *Suillus granulatus*.

Based primarily on the ITS region of the holotype collection.



Key Problems to Resolve

Fuscoboletinus weaverae was described as having a spore print with red and purple hues and a veil, neither of which *Suillus brevipes* or the *Pinus strobus* '*Suillus granulatus*' has.

If the holotype and topotype are indeed conspecific what explains the different ITS results?

Methods

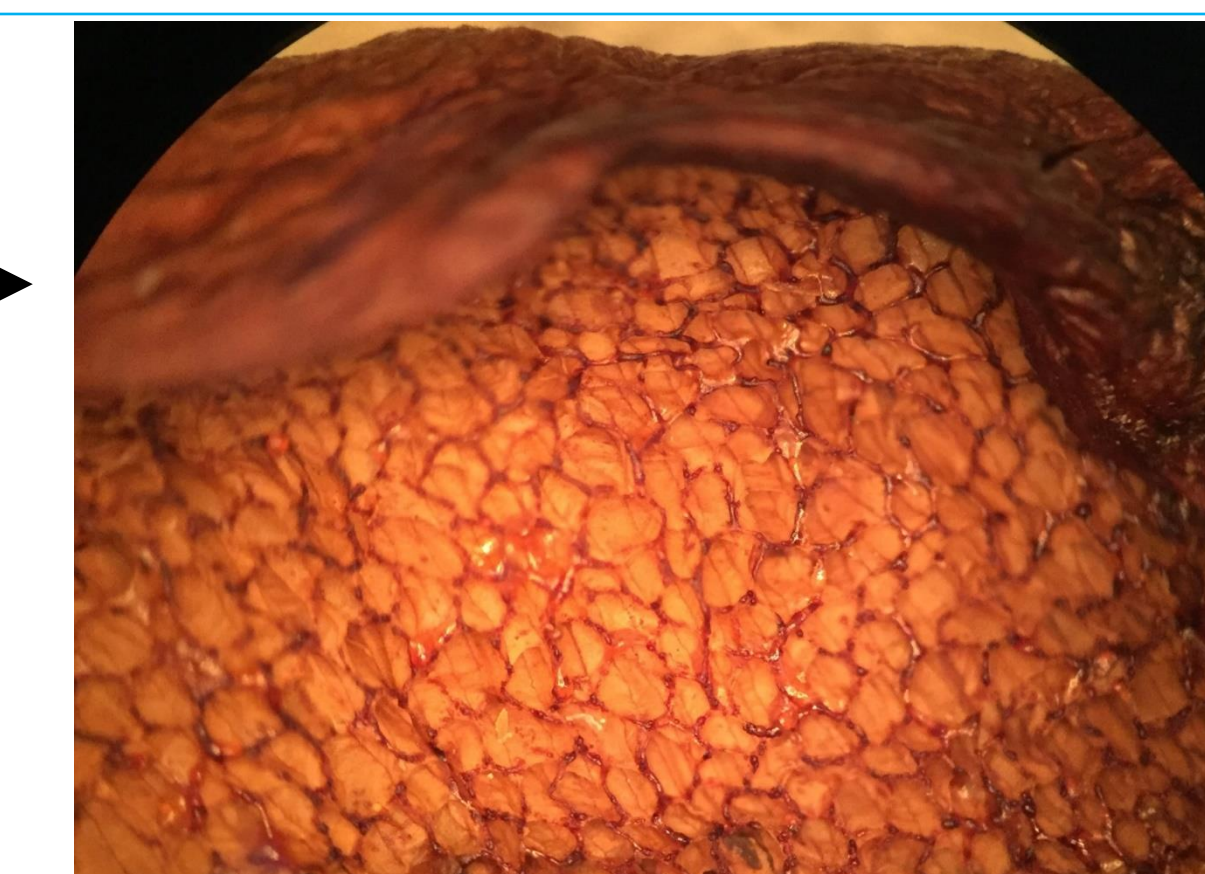
Both the holotype and topotype of *Fuscoboletinus weaverae* were examined and resequenced.

Results

The red and purple colors of the *F. weaverae* spore print are from glandular pigments not from the spores.

The 'veil' is mycelium of a mycoparasite as postulated by Nguyen *et al.*

Resequencing confirmed that the topotype is not conspecific with the holotype and that the holotype is indeed identical with the North American '*Suillus granulatus*' associated with *Pinus strobus*.



Proper Authorities

Also requiring resolution were the proper authorities for the generic transfer to *Suillus* as 2 groups both made the transfer in 1996. Engel & Klofac were first beating Kretzer & T.D. Bruns by only a matter of weeks and thus have priority as the proper authorities for the generic transfer.

Conclusions

'*Fuscoboletinus weaverae*' is the *Suillus* species associated with *Pinus strobus* long known under the European name of *Suillus granulatus*. Concept 3 above.

H. Engel & Klofac get credit for the generic transfer.

Thus: ***Suillus weaverae* (A.H. Sm. & Shaffer) H. Engel & Klofac.**

And finally, '*F. weaverae*' is not rare after all.

A *Suillus* by any other name

Singer 1945 published the name *Suillus granulatus* ssp. *snellii*. Elevating this name to species level as *Suillus snellii* would provide a 'clean' name for the '*S. granulatus*' associated with *Pinus strobus*. But Nguyen *et al.* were correct in using the name *S. weaverae* based on the International Code of Nomenclature for algae, fungi, and plants so we have a name whose description does not fit the taxon.

Acknowledgement

The University of Michigan Herbarium (MICH) kindly gave permission to examine and sequence the specimens of *Fuscoboletinus weaverae*

