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Description of Mushroom Samples submitted by David Tepper

September 7 and 8, 2010

Samples implicated in poisoning and death of pet canine Bellabee. Identification of *Amanita bisporigera*.

This set of ten figures (on nine pages), accompanies a narrative describing the analyses performed on the samples.

Submitted Sept. 15, 2010

Respectfully,

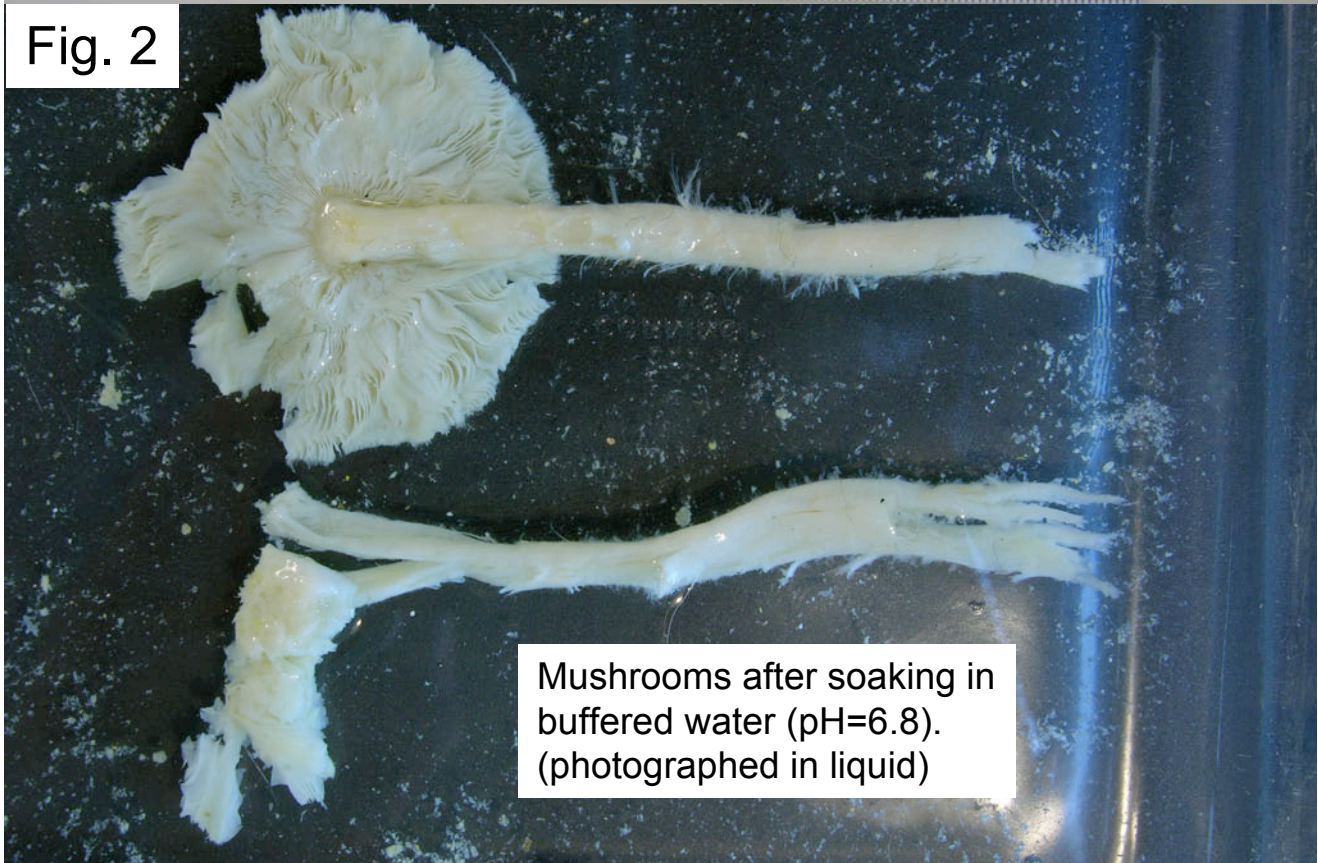
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Mushrooms expelled from Bellabee (tentative diagnosis: Amanita spp.)

Fig. 1



Fig. 2



Detail of ingested/expelled mushroom (larger specimen), viewed under layer of buffered water

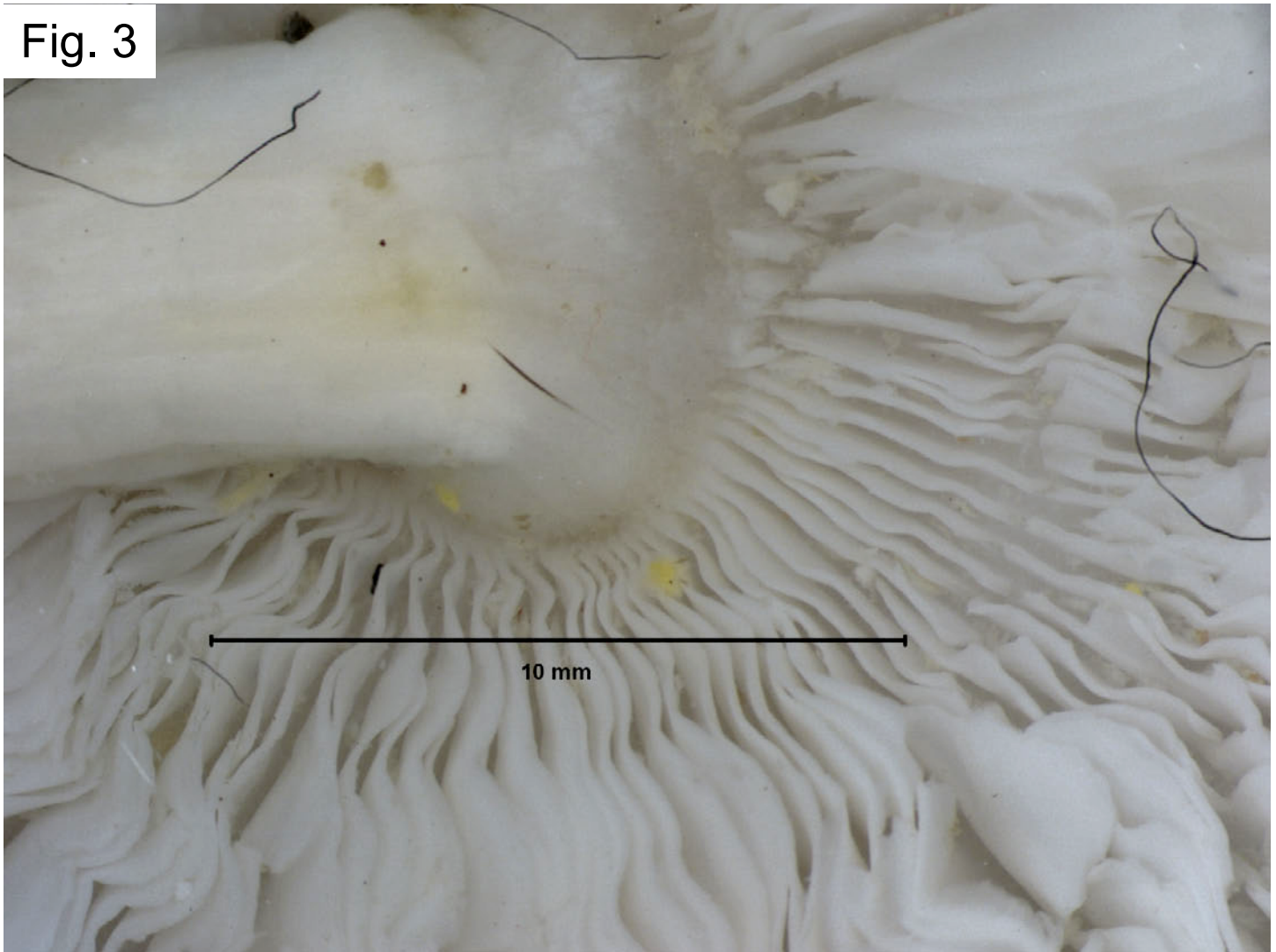
-Gill spacing is "crowded"

-Gill attachment is "free" to "slightly adnate"

Attempts to view hymenium microscopically did not yield high quality views)

Scale bar = 10 mm

Fig. 3



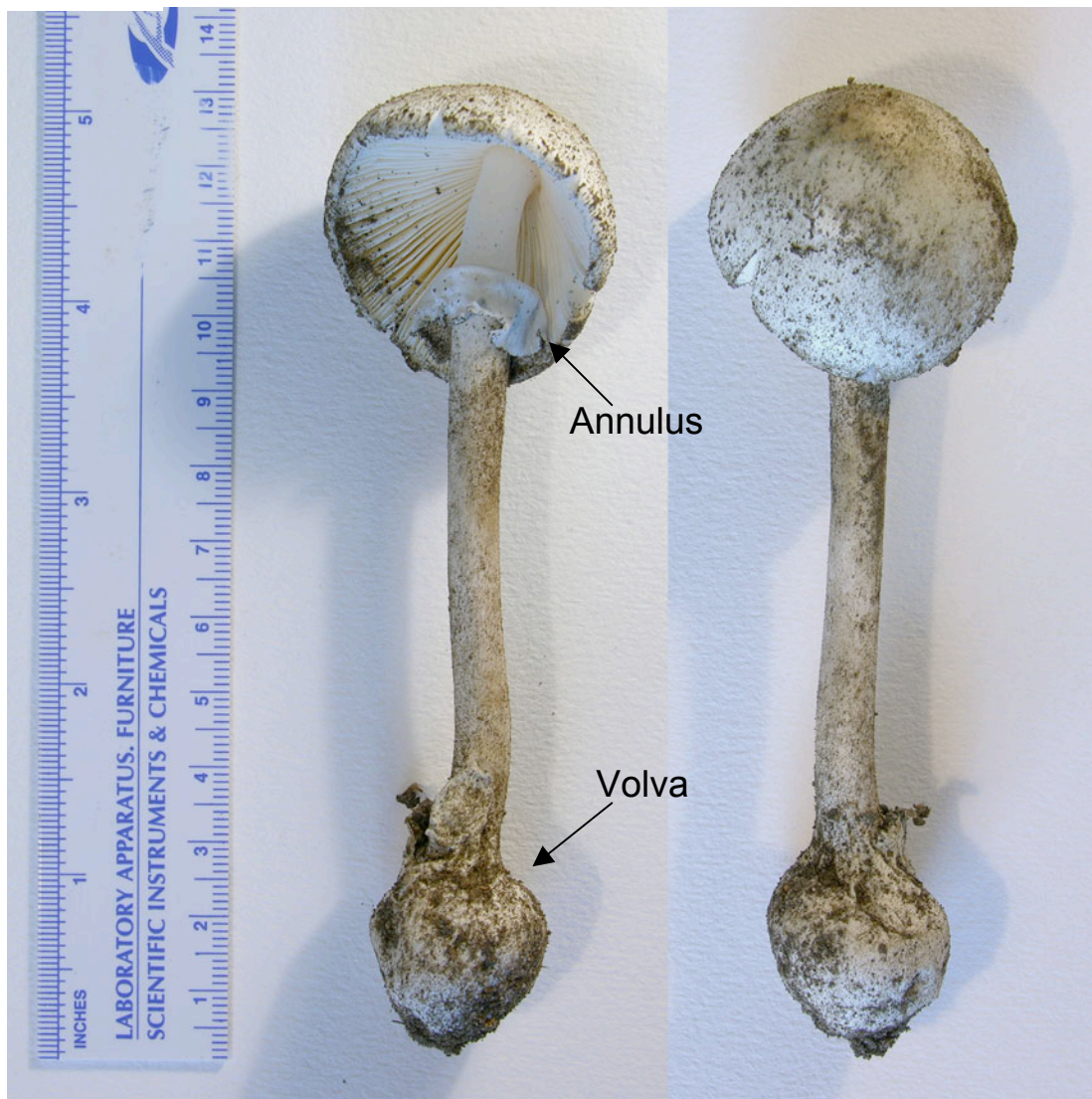
Mushroom collected by David Tepper,
suspected in Bellabee's poisoning

Tentative diagnosis: *Amanita bisporigera*

Relevant traits:

- Cup-shaped volva at base of stem (stipe)
- Annulus (ring on stipe)
- Color-white (this specimen has soil on it)
- Free to slightly attached gills (i.e. to stipe))
- Gill spacing - close
- Gills - white
- Size within normal range for this species

Fig. 4



Mushroom collected by David Tepper,
suspected in Bellabee's poisoning

Tentative diagnosis: *Amanita bisporigera*

Fig. 5

Detail of gills:

- Free to slightly attached to stipe
- Gill spacing - close
- Gills - white
- Size within normal range for this species

Scale bar: 5 mm

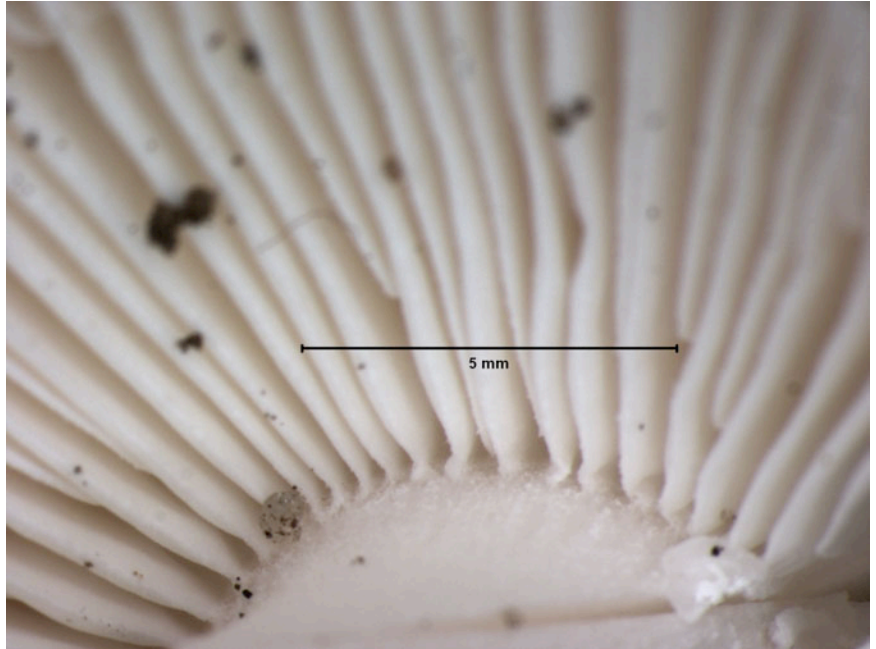


Fig. 6

Detail of Annulus:

Scale bar: 5 mm



Mushroom collected by David Tepper,
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Tentative diagnosis: *Amanita bisporigera*

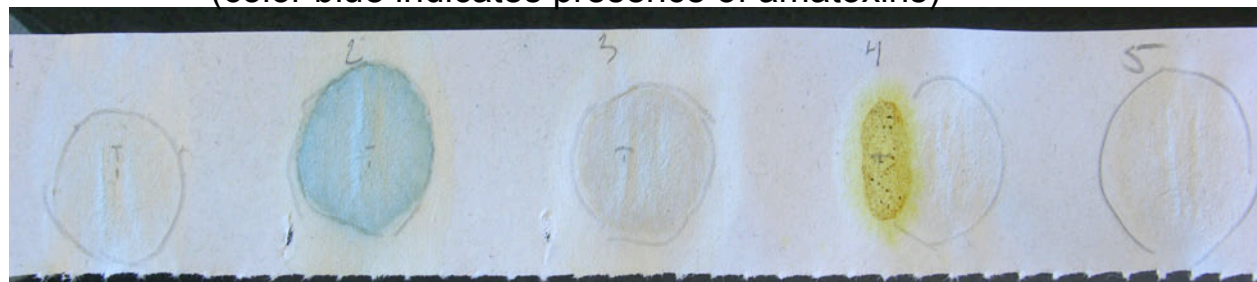
Test results

3% KOH, positive (yellow color on cap) 2 mins after treatment



Fig. 7

Fig. 8 Meixner Test results (20 mins post HCl)
(color blue indicates presence of amatoxins)



1	2	3	4	5
Sample from Bee	<i>Amanita bisporigera</i>	<i>Russula spp.</i>	<i>Suillus spp.</i>	Blank (HCl only)

Mushroom collected by David Tepper,
suspected in Bellabee's poisoning
Tentative diagnosis: *Amanita bisporigera*

Microscopic details of gill surface (hymenium) Scale bars: 50 μm
Magnification: A, B, 145x; B, C, 290x; E, 940x.

-A, B, C, Bisterigmate basidia observed (arrows)

-C, D, Basidiospore dimensions approx 7-8 x 8-10 μm

-E, Higher magnification views of bisterigmate basidia in "A"

Fig. 9

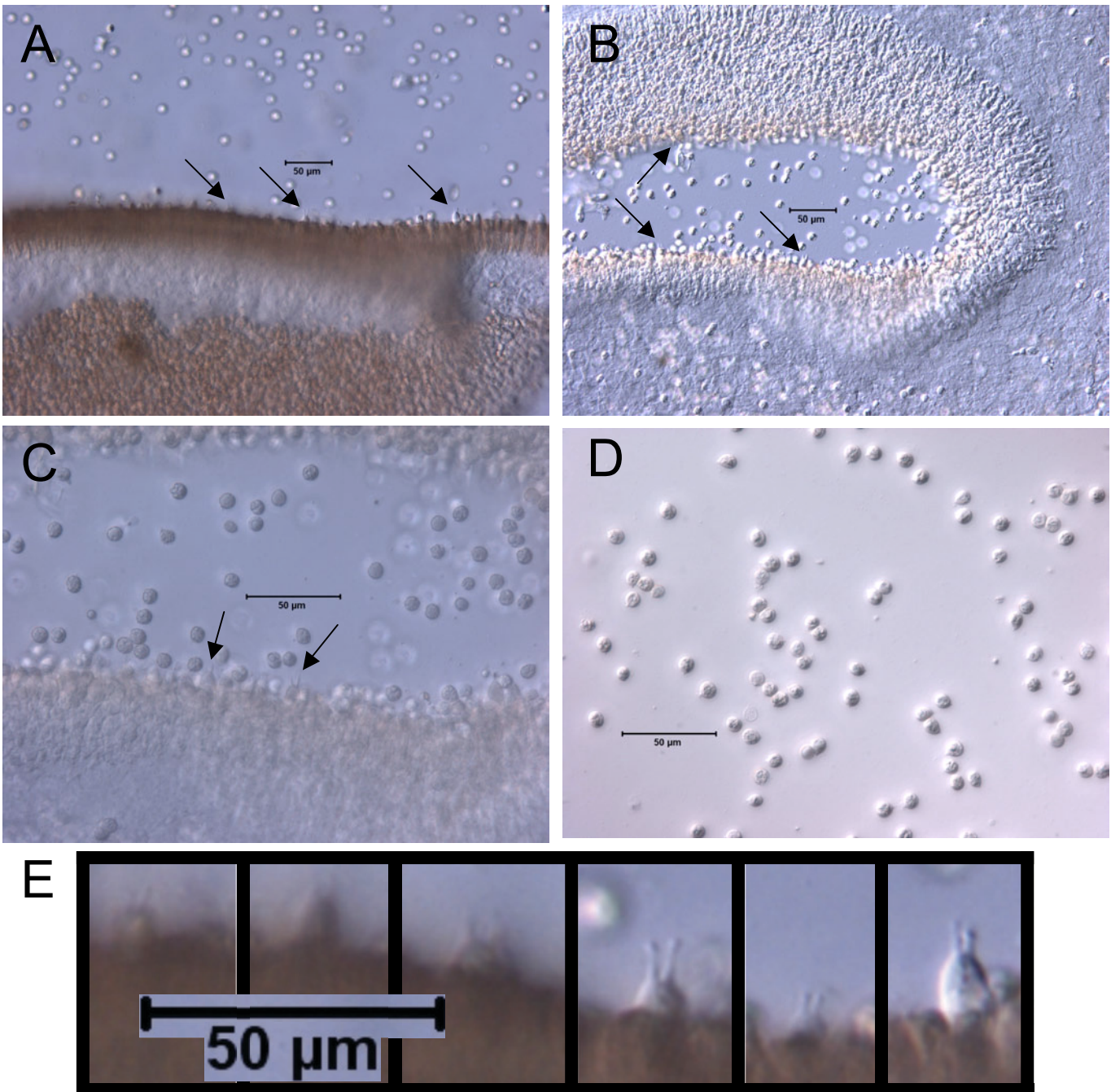


Fig. 10. Basidia morphology.

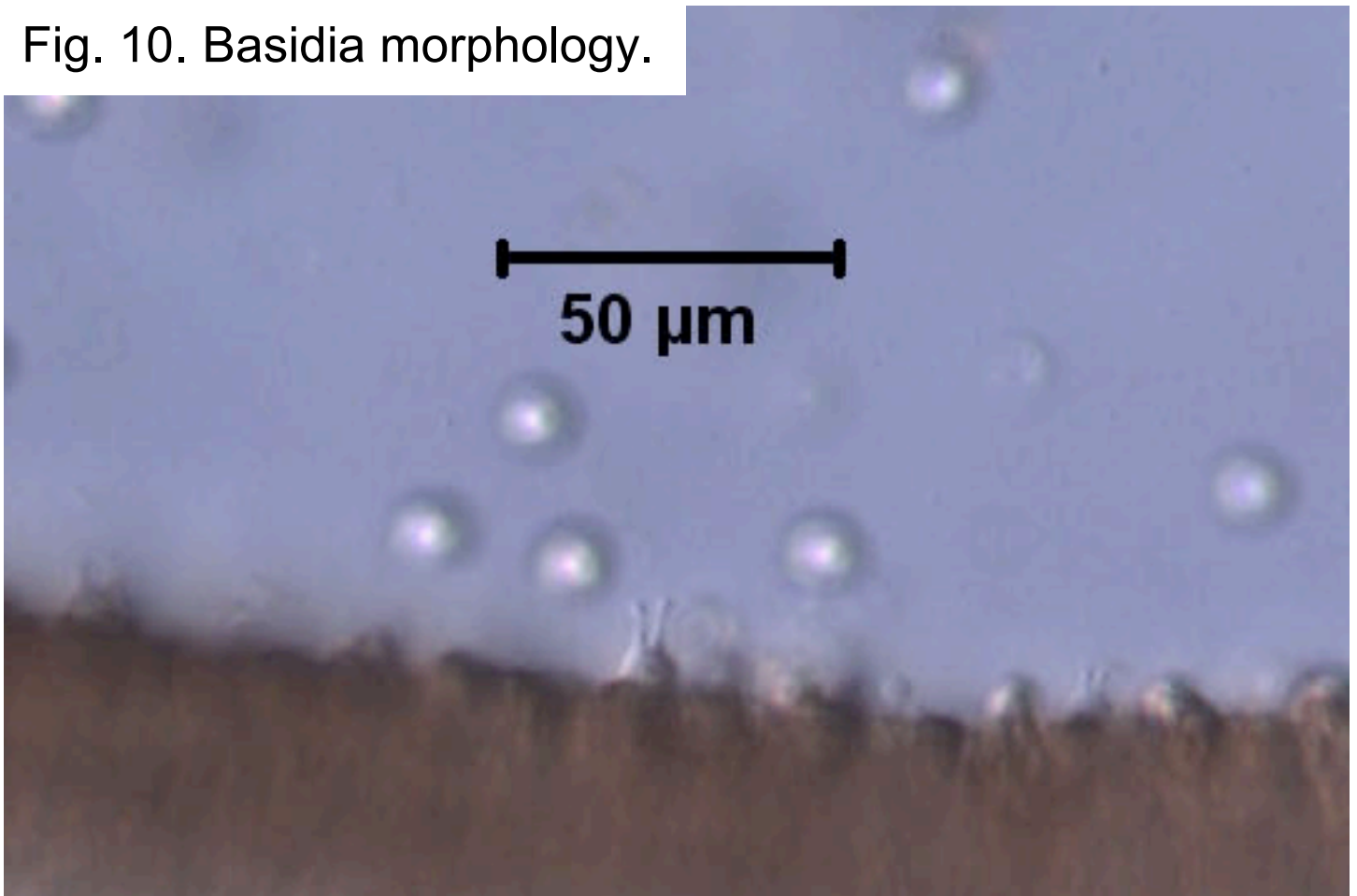
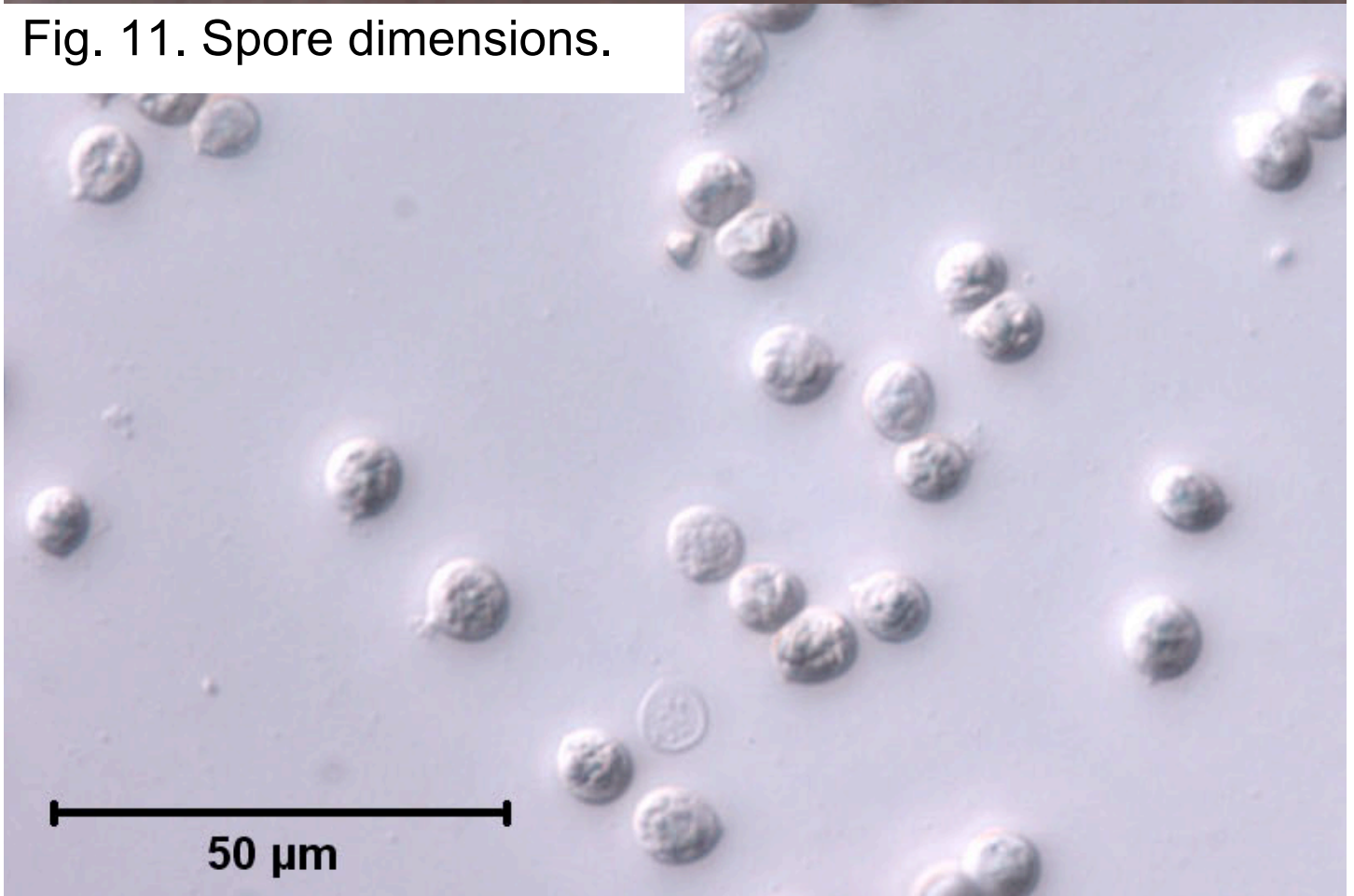


Fig. 11. Spore dimensions.



Web Sources of Information

Amanita bisporigera Sources:

-Rodham E. Tulloss' page on *Amanita bisporigera* "Eastern North American Destroying Angel"

<http://www.eticomm.net/~ret/amanita/species/bisporig.html>

-Tom Volk's Fungus of the Month for September 1997

http://botit.botany.wisc.edu/toms_fungi/sept97.html

-Kuo, M. (2003, October). *Amanita bisporigera*

http://www.mushroomexpert.com/amanita_bisporigera.html

Galerina autumnalis

-*Galerina autumnalis* is another local poisonous mushroom that contains amatoxins. The small, brown mushrooms are usually found on heavily decayed wood in the forest, in groupings of several to many mushrooms on a log. More information:

http://www.mushroomexpert.com/galerina_marginata.html