

# Distribution and Pathogenicity of the Protist *Labyrinthula* sp. in western Mediterranean Seagrass Meadows

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© C d : 21 2010/ d : 6 A 2011 / A d : 18 M 2011  
d E Fd 2011

## Abstract

*Labyrinthula* sp.,  
d 18  
d B ( Md ).  
d 70%  
d d  
( . ., *Posidonia oceanica*, *Cymodocea nodosa*, d  
*Zostera noltii*). *Labyrinthula* .

## Labyrin-

d  
d

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( )pathogenic(70%)Tj / 1.67)Π 1 J 0 1113820.6101.2467d ((thead))7.8 J 76T44

d d d d d  
d d d ,  
d .  
H d d d d d  
d Zostera marina d A  
d 1930 d  
Labyrinthula zosterae d  
- d d ( 1936; 1943;  
M . 1991). , Labyrinthula .  
d Zostera  
capricorni d 1960 (A  
1964) d Thalassia testudinum F d B d  
1980 ( . 1991). I , Labyrinthula  
. d (M  
. 1988; . 1993; d d H 1994;  
d H . 1996), d  
d Labyrinthula  
. d d  
d , d ( . .,  
. 1991; . 1995),  
Labyrinthula . ( . ., d )  
( . ., 1938; M K d  
2009). M , d  
d Labyrinthula  
. (M . 1988; B d M ,  
).  
Labyrinthula . d  
d d , d -  
d d , d  
d d d  
d (M  
1992). I Labyrinthula . d  
d d ,  
( d 2002).  
Labyrinthula . d d  
, d : Z. marina, Zostera  
mucronata, Zostera noltii, Zostera japonica, Heterozostera  
tasmanica, P. oceanica, Halodule universis, Halodule  
wrightii, Cymodocea nodosa, Phyllospadix scouleri, Syrin-  
godium isoetifolium, Thalassodendron ciliatum, Ruppia  
cirrhosa, Ruppia maritima, T. testudinum, d Halophila  
ovalis ( d d H 1991; d d H  
1994; M d B ant ( ul7n046)0JTEdM1 /Linkt4</M/CID1 40 >BDC00106f17Tff ( )TS 1 T.729 T6.94.8,1\_1 1 Tf ( )Tj /

I d , v. 1,200 <sup>2</sup>. d I Labyrinthula .  
d d 0-45 . C. nodosa  
d d Labyrinthula . d  
P

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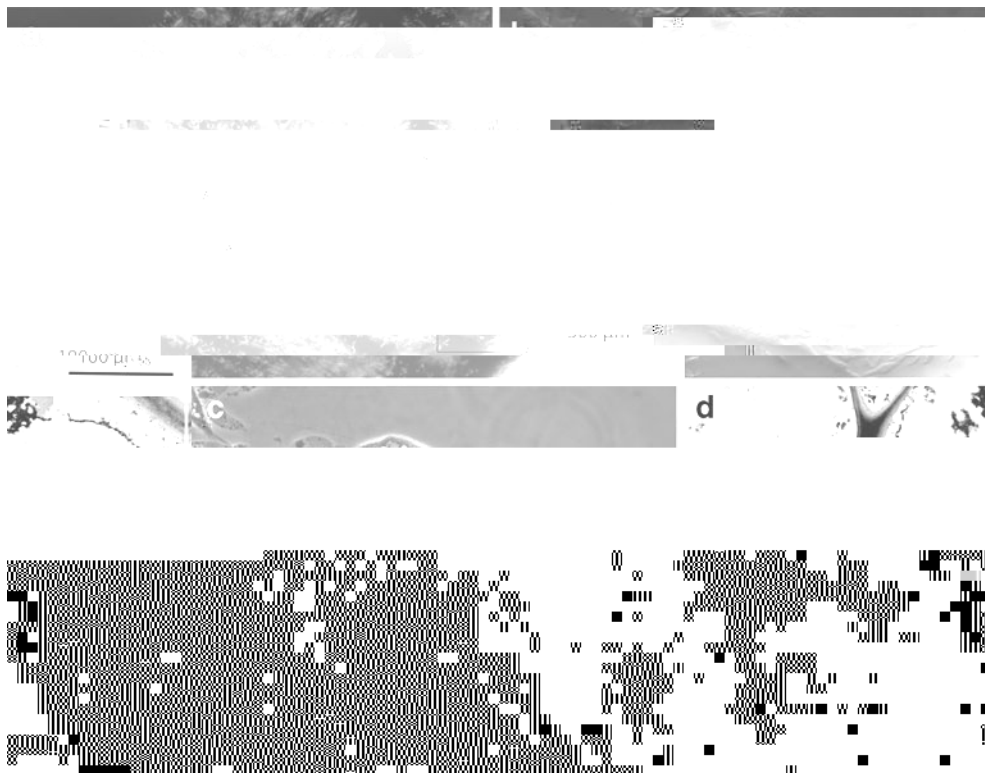


Fig. 2  
A

Labyrinthula . . . d  
T. testudinum . . .



d 60 C 16 . ( -

C d (2006), Labyrinthula . T.  
testudinum - d Z. marina,

d  
d Labyrinthula .  
d T. testudinum d d B , F d ,  
d d ,  
d Md ,  
A , d F d .  
Labyrinthula . P. oceanica ,  
d , , d d -  
thula . d . Ad , Labyrin-  
thula . d d d  
d , d

d M . (1988).  
Labyrinthula . d d  
d d

Md  
(T. testudinum d Z. marina)  
Labyrinthula . d P. oceanica.

C ,  
Labyrinthula . d d  
d .  
I , d Labyrinthula .  
d Md -  
d d . P. oceanica  
Labyrinthula . ,  
- d d

,  
A Labyrinthula .  
d , Md  
d Labyrinthula .  
. I d d  
d Labyrinthula .  
d . I  
d ,  
d d d .

Acknowledgments d d F d

- , C.E. 1936. *Zostera marina*. I, A Bulletin 70: 148–158.
- , M.B., . . . B , . . . C , M.J. D , J . F - , L.K. M , D. , L.A. , . . . , d J.C. . 1991. M *Thalassia testudinum* F d B ( A). Marine Ecology Progress Series 71: 297–299.
- , G.M., .K. , F.C. D , L.A. D , . M d , A. H , d . . C . 2000. G d - B d . Nature 408: 49–50.
- , F. ., D. , H. I , d K. A . 1993. *Labyrinthula zosterae* J . Diseases of Aquatic Organisms 16: 73–77.
- , . . , d F.J. . 1995. Biometry: The principles and practice of statistics in biological research, 3d d . H. F . , L., M. C d , A.E. B , d .M. A d . 2005. - : d - d . Marine Ecology Progress Series 303: 123–131.
- , .G. 1938. *Zostera marina* d . The New Phytologist 37: 50–71.
- , L.H. ., d C. d H . 1991. *Zostera noltii*. Aquatic Botany 40: 155–163.
- , L.H. ., d C. d H . 1994. Labyrinthulaceae . Aquatic Botany 48: 1–20.
- , L.H. ., .L. A , d J.D. d G . 1995. d d ( - , - ) d *Labyrinthula zosterae* *Zostera marina* . Aquatic Botany 52: 35–44.
- , M., C.M. D , .J.B. C , .J. .C. D , . , A. C d , J . F , K.L. H J., A. . H , G.A. K d .J. K , F. . , d .L. . 2009. A . Proceedings of the National Academy of Sciences of the United States of America 106: 12377–12381.
- , E.L. 1943. d *Labyrinthula*, d - . American Journal of Botany 30: 586–59 121 3.5680548 .54/53:471