Jo nal of A lied Ecolog 2003
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The effect of densit -dependent catastrophes on pop ation persistence time

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S mmar

1.

2.

3. *Lobodon ca cino hag*

4.

5. *S n he i and a lica ion*

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Introd ction

(1.). (1. 2 , , , & / 1. 3 , & 1. / *e al.* 2002). (, & 1. / 2 1. / 1. / .). & 1.). 1. 3). (1. 3 , & 1. 3).

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(& 1.. 1 , & 1.. 3 & 1.. 4).

(*e al.* 2001).

(1.. 3 & 1.. 4 & 1..).

(1.. 4)

2001),

1.. 0).

2. 4 -0 & 33 (, ,3, 1(-)2. 5 (

Methods

*C. Wilco & *

$(B(\ )\Delta + o(\ )\Delta),$ 0 (&

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$$\mathbf{T} = \varepsilon_{-1}\mathbf{M}^{-1}(b(\varepsilon), d(\varepsilon), c(\varepsilon)) \quad 10$$

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PA A VAL

Ba ic demog a hic a e

$\lambda = 1.01$ $\lambda = 1.0$. λ 1 1 ( ). 1 (1). & (1) 100, $B(\ ) = 0$.

Ca a o he obabili

0 00 0 02. 100 1 0 1 . ω_1 ( ) ω_1. $(\omega_0 > 0, \omega_1 = 0)$, $(\omega_0 = 0, \omega_1 > 0)$. $(\omega_0 > 0, \omega_1 > 0)$.

Ca a o he in en i

0 , 0 2 0 1.

C abea e eal

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Appendi 1

λ, 1 1 $N( )$, b d

[redacted] 1.1

[redacted] 1 2

$\lambda = e = e^{(b-d)}$

[redacted] 1 3

$d = 0\,3$ $\lambda = 1\,01$ 0 3 $\lambda = 1\,0$.

0 3 2 0 3 2 1 0 0 0 0

20

Appendi 2

e al. (1 2) (& 1). *e al.* 1 0, 44 00 10 000 1 31, 1 1 4. i^{h} $i+1$

$< + d$

$= ce^{-c} d + o(d)$ 2 1

c 0 0 2 % $0 < c < 0\,11$.