

L. pectoralis

Responses to previous management of sites.



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Likely breeding sites of *L. pectoralis* known 1990-

- Underlined: *L. pectoralis* probably breeding 2011
- Red: Known nature management impacts on breeding sites 1990-

Tisvilde Hegn, N of Asserbo Ruin

1990: Old forest pond dug on nutrient-poor sandy soil - depth <40 cm - rather dense, but low aquatic and emergent vegetation. – Rather clear, clean water. – No larvae of L.p. seen.

c. 1991: Deepened >1 m, water level raised.

1995: L.p. discovered breeding/larvae in large numbers. Clear, slightly acid water. Well-developed sunny fringes of submerged *Sphagnum denticulatum*. Narrow, but sunny zone of emergent plants along sides. Rich Odonata-fauna with also e.g. *Coenagrion lunulatum*, *C. hastulatum*, *A. juncea* and *L. dubia* breeding. Also the corixid *Hesperocorixa castanea*.

1997- L.p. hatched, but only few adults seen later 1997 - in years after none. Water more turbid, submerged vegetation almost absent. Nutrient-loving plants taking more over. Previously rich fauna disappear.



Vaserne

Late 1990-ies: Clearings of bushes/trees – previously bordering several peat-ponds/lakes - in large, mineral-rich fen area. Grazing established. Now a number of ponds with open, sunny edges.

1999: L.p. discovered (only one newly hatched, but otherwise not seen during 1999-visits – small/local populations could have been overlooked, though).

2004: Large L.p. population seen, breeding in several large and small peat-ponds.

In years after, L.p. still breeding numerously, though water-quality is gradually decreasing several places and nutrient-loving emergent vegetation increases along pond-edges.



Jonstrup Vang, N. of St. Sejben Mose

c. 2004: wet, somewhat acid forest-swamps drained by deep ditches partly cleared from trees (mainly spruce), water-level raised to permanent water-cover. MoE.

2009: L.p. discovered. Since then found breeding in fair number.



Piberdam, N.

1990-ies?: Pond dug out in small bog surrounded by forest (as larger, more nutrient-rich pond to the South).

1998: At least 2 specimens of L.p. recorded, Odonata not recorded earlier.

2002-now : No L.p. seen. Previously open, rather deep, somewhat acid water, which gradually has become completely covered by the floating carpets of mosses and Carex etc. Even L. rubicunda has now left.



Uglesø Mose, N

2007: Private areas of bog, peat-ponds and small lake bought by state/MoE.

2010: Trees and bushes, e.g. densely surrounding the waters, cleared. Now open, sunny borders/surroundings of ponds, nothing else seems changed. *Utricularia*, *Sparganium natans*, *Comarum*, *Typha*, mosses, fish.

2011: L.p.: Discovered – at least 3 males, probably breeding now. Previously looked for in vain at several times/years.



Tokkekøb Hegn, St. Stolmer Dam

Ca. 1995?: Rather nutrient-poor, but rather overgrown forest-surrounded swamp/pond, of which parts were dug out, and water level was later raised to more permanent water-cover of the whole area. MoE. Earlier the place had not looked as anything suitable for L.p.

2005: Large breeding population of L.p. discovered.

Still a large breeding population of L.p. Furthermore a rather species-rich place regarding plants as well as insects, including a number of well-doing uncommon species. Also *Triturus cristatus* breeding. fairly good water-quality and overgrowing only slowly progressing.



Tisvilde Hegn, Bølleljuven W

Ca. 1992: New forest pond dug on sandy, nutrient-poor soil. MoE.

2004, June: 2-3 territorial L.p. males seen. Rather clear-watered. Well developed vegetation with e.g. *Chara virgata*, *Sparganium natans* and *Juncus bulbosus*, and *Phragmites*, *Typha* etc. Along edges. A rich Odonata-fauna with uncommon species also noted as in the previous years. *Triturus cristatus* breeding.

Since then: L.p. never seen again. Water becoming more turbid/brownish, and *Chara*-vegetation more reduced. High emergent plants slowly increasing along edges. Still a fair Odonata-fauna and uncommon plants, though. (Perhaps fish? - gold-fish seen recently in nearby pond)



Allerød Sønderskov, Kro- og Kirkemoserne

1977: 2 males of L.p recorded at/near the locality. Likely breedingplaces then were 1-2 deeper/larger peat-ponds.

c. 2000: water-level raised in the wet, somewhat acid and nutrient-rich forest-surrounded swamps, water-level raised to more permanent water-cover over large parts of the site. MoE.

2004: L.p. discovered breeding in large number, breeding/hatching over most of the area.

Since then found breeding in fair number, though increased emergent vegetation is now closing water-surfaces on the more open swamp-areas, but still leaving the now deeper pools, ponds and ditches as breeding-sites.



The end



Thank you for your patience