

## ADDITIONAL AMPHIBIANS FROM A PLEISTOCENE INTERGLACIAL DEPOSIT AT PURFLEET, ESSEX

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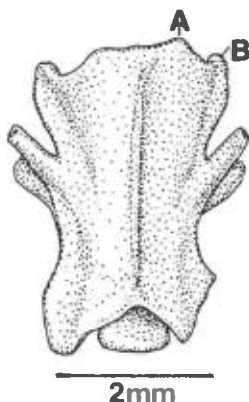
Pleistocene deposits in the Thames Valley at Purfleet, Essex, (TQ 568785) are considered to represent the Ipswichian Temperate Stage of the Pleistocene (Hollin, 1977; Jones and Keen, 1993). Holman and Clayden (1988) published on the first fossil amphibians and reptiles from Purfleet from sediments sieved at the Greenlands Pit by J.D. Clayden. In 1993, Simon Parfitt of the Field Archaeology Unit of University College London, collected additional herptile material from a new locality at Purfleet. The Parfitt locality is at Stonehouse Lane, Essex, and consists of fluvial deposits at the edge of Purfleet Channel between the Bluelands and Greenlands Pits.

Sediments sieved by S. Parfitt at the new Purfleet locality yielded some very fragmentary colubrid snake remains that could not be identified to the generic level as well as some amphibian fossils that were identified to the generic and in one case the specific level. These new amphibian remains form the subject of the present paper.

### THE NEW MATERIAL

*Triturus cristatus* (Laurenti) - Warty newt

*Material*: Three vertebrae from Parfitt Locality, Sample 54. The trunk vertebrae of *Triturus cristatus* are larger and have a lower neural spine than those of *T. helveticus* and *T. vulgaris*. Moreover, in *T. cristatus* the posterior end of the neural arch extends posterior to the posterior end of the postzygapophyses, whereas in the other two species the posterior end of the neural arch ends anterior to the posterior end of the postzygapophyses.



**Fig. 1.** Trunk vertebra of *Triturus cristatus* (Sample 54) from the Pleistocene Temperate Stage at Purfleet, Essex. A, posterior end of the right side of the neural arch (the left side of the neural arch has been worn away). B, posterior end of the right postzygapophysis.

*Triturus* sp. - Newt

*Material*: One fragmentary vertebra from Parfitt Locality, Sample 11 and four fragmentary vertebrae from Parfitt Locality, Sample 54. These vertebrae are too fragmentary to identify to the specific level.

*Bufo* sp. - Toad

*Material*: One very large trunk vertebrae represents the genus *Bufo*, but I have not been able to identify *Bufo* trunk vertebrae to the specific level.

*Rana* sp. - Frog

*Material*: Eight left and three right fragmentary ilia. These ilia are too fragmentary to identify specifically.

### COMMENT

The following herpetological species are now known from the Ipswichian Temperate Stage of the Pleistocene at Purfleet, Essex.

*Triturus cristatus*

*Triturus* sp.

*Bufo bufo*

*Bufo* sp.

*Rana arvalis arvalis*

*Rana temporaria*

*Rana* sp.

*Anguis fragilis*

*Natrix* cf. *Natrix natrix*

The most significant find at the new Purfleet deposit is *Triturus cristatus* which is reported from the Ipswichian Temperate Stage of the Pleistocene for the first time. Although not surprising, the record is noteworthy because the only other Pleistocene records of *T. cristatus* are from the Middle Pleistocene sites at Cudmore Grove, Essex (Holman, 1993) and East Barnham Farm, Suffolk (Ashton et al., 1994).

### ACKNOWLEDGEMENTS

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### REFERENCES

- Ashton, N.M., Bowen, D.W., Holman, J.A., Hunt, C.O., Irving, B.G., Kemp, R.A., Lewis, S.G., McNabb, J., Parfitt, S. and Seddon, M.B. (1994). Excavations at the Lower Palaeolithic site at East Farm, Barnham, Suffolk 1989-92. *Journal of the Geological Society of London* **151**, 599-605.
- Hollin, J.T. (1977). Thames interglacial sites, Ipswichian sea levels and Antarctic surges. *Boreas* **6**, 33-52.
- Holman, J.A. (1993). British Quaternary Herpetofaunas: a history of adaptations to Pleistocene disruptions. *Herpetological Journal* **3**, 1-7.
- Holman, J.A. and Clayden, J.D. (1988). Pleistocene interglacial herpetofauna of the Greenlands Pit, Purfleet, Essex. *British Herpetological Society Bulletin* **26**, 26-27.
- Holman, J.A. and Stuart, A.J. (1991). Amphibians of the Whitemoor Channel early Flandrian site near Bosley, East Cheshire; with remarks on the fossil distribution of *Bufo calamita* in Britain. *Herpetological Journal* **1**, 568-573.
- Jones, R.L. and Keen, D.H. (1993). *Pleistocene Environments in the British Isles*. Chapman and Hall, London.