

— Scientific data —

Palaeontological publications of Dr Fiona E. Fearnhead (1957–2022)**Stephen K. Donovan***

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Abstract

Fiona Fearnhead made her home in palaeontology late in life, but rose to prominence as an expert on the Devonian and, particularly, Silurian crinoids of the British Isles. She was a co-author of two major monographs on these fossils, as well as of contributing chapters and shorter papers on crinoids, trace fossils and museum studies. Fiona was author or co-author of twenty-one new species of mid-Palaeozoic crinoid.

Key words: crinoids, Silurian, Devonian, trace fossils, museums

1. Introduction

(Abridged after Donovan, 2023.) Dr Fiona Fearnhead studied for both her degrees in geology at Birkbeck College, University of London; she attained her B.Sc. (hons) in 2005. Fiona's Ph.D. topic was British Llandovery (Early Silurian) crinoids. I must admit that I influenced her, to excellent effect, to examine these fossils. She became a widely recognised expert on these beautiful stalked echinoderms which had only been studied sporadically for a hundred years.

Most of the research, including fieldwork, for Fiona's Ph.D. was undertaken when she was temporarily resident in the Netherlands, with an honorary position as a guest researcher at the Nationaal Natuurhistorisch Museum (Naturalis) in Leiden. Areas for fieldwork were various, including the Pentland Hills (e.g., [2, 9, 13, 14]), south-west Scotland ([4, 7, 16]), Shropshire ([5, 6]), and south-west and mid-Wales. Fiona's Ph.D. thesis, *Systematics and Palaeobiology*

of British Llandovery Crinoidea [12], was supervised by Dr C. J. Underwood and formed the basis of her contribution to *The British Silurian Crinoidea* ([8, 11]). Publication of such a detailed monographic study of the internationally important British Silurian fauna was long overdue. The only previous such volume was an unpublished Ph.D. thesis (Ramsbottom, 1953; Donovan, 2009).

2. Themes**2.1. Crinoidea**

(Bibliography 2, 4–9, 11–17, 19, 22, 25, 29, 31–34.) Most importantly, Fiona was the Queen of the mid-Palaeozoic crinoids of the British Isles. Her contribution over less than two decades of working on the systematics and faunistics of mid-Palaeozoic crinoids was significant. Most notably, she co-authored two Palaeontographical Society monographs. In addition to the three-part Silurian volume [11], she co-authored

the two parts of *The British Devonian Crinoidea* ([19]). The Devonian crinoids had been monographed at the end of the 19th century and then had received little attention for over 100 years. In writing about the Devonian crinoids, we had an equitable division of labour, with Fiona concentrating on making new collections (e.g., [22]), while I reviewed old museum collections ([29]).

2.2. Trace fossils

(Bibliography 3, 10, 18, 21, 26, 27, 35.) Fiona collected trace fossils, principally borings both ancient and modern, as an adjunct to her fieldwork on crinoids. They were there; specimens in museums and the field posed interesting questions (e.g., [21]), and they were an interest we shared. For example, we researched one intensely burrowed Silurian surface in the Pentland Hills of Scotland with the late Professor E. N. K. Clarkson [10] while collecting Silurian crinoids from the same area [9, 13, 14].

2.3. Museums and miscellaneous

(Bibliography 1, 20, 23, 28, 30.) Fiona's last job was as geologist for the Angela Marmont Centre for UK Biodiversity (AMC) at the Natural History Museum, London (NHMUK). She was keen to advertise the work and potential of the AMC in amateur (e.g., [23]) and NHMUK journals ([20]). She was also keen to record unusual body fossils from her fieldwork ([28, 30]).

3. Bibliography

Dr Fearnhead's name is given in bold throughout. Conference abstracts are excluded. References are provided in chronological order and are also numbered for ease of reference in the text.

- [1] Palmer, C. P., and **F. E. Fearnhead**. 2004. Molluscs and the Corinth Canal. *Mollusc World* 4: 8–9.
- [2] Donovan, S. K., **F. E. Fearnhead**, and D. N. Lewis. 2007. Crinoids. In E. N. K. Clarkson, D. A. T. Harper, C. M. Taylor, and L. I. Anderson, eds., *Silurian Fossils of the Pentland Hills, Scotland*. Palaeontological Association Field Guides to Fossils 11: 172–180.
- [3] Donovan, S. K., **F. E. Fearnhead**, and C. J. Underwood. 2007. Recent borings in limestone

cobbles from Marloes Bay, southwest Wales. *Lethaia* 40: 233–236.

- [4] **Fearnhead, F. E.**, and S. K. Donovan. 2007. A cladid crinoid (Echinodermata) from the Llandovery (Lower Silurian) of the Girvan district, SW Scotland. *Scottish Journal of Geology* 43: 79–82. [2007. Corrigendum. *Scottish Journal of Geology* 43: 180.]
- [5] **Fearnhead, F. E.**, and S. K. Donovan. 2007. New crinoids (Echinodermata) from the Llandovery (Lower Silurian) of the British Isles. *Palaeontology* 50: 905–915.
- [6] **Fearnhead, F. E.**, and S. K. Donovan. 2007. A robust crinoid from the Llandovery (Lower Silurian) of Norbury, Shropshire: systematics, palaeoecology and taphonomy. *Proceedings of the Geologists' Association* 118: 339–345.
- [7] **Fearnhead, F. E.**, and D. A. T. Harper. 2007. *Petalocrinus* (Echinodermata, Crinoidea) from the Llandovery (Lower Silurian, Rhuddanian) of the Girvan district, SW Scotland. *Scottish Journal of Geology* 43: 69–74.
- [8] Donovan, S. K., D. N. Lewis, R. E. Widdison, and **F. E. Fearnhead**. 2008. Ever since Ramsbottom: Silurian crinoids of the British Isles since 1954. In W. I. Ausich, and G. D. Webster, eds., *Echinoderm Paleobiology*. Indiana University Press. Bloomington. p. 330–345.
- [9] **Fearnhead, F. E.** 2008. Towards a systematic standard approach to describing fossil crinoids, illustrated by the re-description of a Scottish Silurian *Pisocrinus* de Koninck. *Scripta Geologica* 136: 39–61.
- [10] Donovan, S. K., **F. E. Fearnhead**, and E. N. K. Clarkson. 2009. The ichnofossils *Gordia* Emmons and *Chondrites* von Sternberg from the Deerhope Formation, North Esk Inlier (Silurian, Llandovery). *Scottish Journal of Geology* 45: 83–87.
- [11] Donovan, S. K., R. E. Widdison, D. N. Lewis, and **F. E. Fearnhead**. 2009–2012. The British Silurian Crinoidea. In three parts. *Monographs of the Palaeontographical Society*, London, 163 (632): 1–45, pls 1–6 [2009]; 164 (635): 47–133, pls 7–36 [2010]; 166 (638): 135–259, pls 37–62 [2012].
- [12] **Fearnhead, F. E.** 2009. Systematics and Palaeobiology of the British Llandovery Crinoidea.

- Unpublished Ph.D. thesis. Birkbeck College, University of London. 307 pp.
- [13] Donovan, S. K., **F. E. Fearnhead**, E. N. K. Clarkson, and M. Donovan. 2011. Aspects of echinoderm palaeontology of the North Esk Inlier, Scotland (Silurian, Llandovery, Telychian). *Palaeontology* 54: 241–252.
- [14] Donovan, S. K., D. N. Lewis, and **F. E. Fearnhead**. 2012. Classic localities explained 10: Crinoid localities of the Silurian of the British Isles. *Geology Today* 28: 230–237.
- [15] **Fearnhead, F. E.**, and S. K. Donovan. 2012. Two Wenlock crinoids, one registration number and a monograph: a tale. *Proceedings of the Shropshire Geological Society* 17: 4–6.
- [16] **Fearnhead, F. E.**, S. K. Donovan, and T. A. M. Ewin. 2013. Palaeobiology of *Floricolumnus* (col.) *girvanensis* Donovan & Clark (Crinoidea: Silurian) from the Girvan district, Ayrshire. *Scottish Journal of Geology* 49: 1–7.
- [17] Donovan, S. K., and **F. E. Fearnhead**. 2014. A dearth of diplobathrids (Crinoidea) from the type Devonian System, south-west England. *Proceedings of the Yorkshire Geological Society* 60: 91–97.
- [18] Donovan, S. K., and **F. E. Fearnhead**. 2014. The nature of trace fossils. *Deposits* 39: 38–43.
- [19] Donovan, S. K., and **F. E. Fearnhead**. 2014–2021. The British Devonian Crinoidea. In two parts. *Monograph of the Palaeontographical Society* 168 (643): 1–55+i–viii, pls 1–15 [2014]; 174 (658) (for 2020): 57–148, pls 16–29 [2021].
- [20] **Fearnhead, F. E.** 2014. British fossils: The value of the amateur collector. *Natural History Museum Evolve* 18: 20–23.
- [21] Donovan, S. K., and **F. E. Fearnhead**. 2015. Exceptional fidelity of preservation in a reworked fossil, Chalk drift, South London, England. *Geological Journal* 50: 104–106.
- [22] **Fearnhead, F. E.**, and S. K. Donovan. 2015. Fossil crinoids from the Valley of Rocks, Lynton, north Devon (Devonian). *Proceedings of the Geologists' Association* 126: 582–588.
- [23] **Fearnhead, F. E.**, F. Feneru, C. Fisher, F. Rumsey, and J. Tweddle. 2015. The Identification and Advisory Service. *Deposits* 44: 28–32.
- [24] Stone, P., A. W. A. Rushton, and **F. E. Fearnhead**. 2015. Charles Darwin's 'Gorgonia' – a palaeontological mystery from the Falkland Islands resolved. *Falkland Islands Journal* 10(4): 6–15.
- [25] Donovan, S. K., and **F. E. Fearnhead**. 2016. Two little-known crinoids from the type area of the Devonian, south-west England. *Proceedings of the Geologists' Association* 127: 712–715.
- [26] Donovan, S. K., and **F. E. Fearnhead**. 2016. Cramped conditions: palaeontological implications of Recent borings in a chalk cobble. *Deposits* 45: 48–49.
- [27] Donovan, S. K., and **F. E. Fearnhead**. 2017. A Recent redirected boring, *Gastrochaenolites ornatus* Kelly and Bromley, in the Upper Cretaceous chalk of south-east England. *Bulletin of the Mizunami Fossil Museum* 43: 27–29.
- [28] Donovan, S. K., and **F. E. Fearnhead**. 2017. An enigmatic echinoid spine from south Devon, UK: Devonian or Cretaceous? *Proceedings of the Yorkshire Geological Society* 61: 165–167.
- [29] Donovan, S. K., and **F. E. Fearnhead**. 2017. A Lower Devonian hexacrinid crinoid (Camerata, Monobathrida) from south-west England. *PalZ* 91: 217–222.
- [30] Donovan, S. K., **F. E. Fearnhead**, and A. J. de Winter. 2017. Two rare taxa from the type area of the Devonian, south-west England. *Proceedings of the Geologists' Association* 128: 675–678.
- [31] Donovan, S. K., and **F. E. Fearnhead**. 2020. Classic localities explained 24: Crinoid localities of the Devonian of the British Isles. *Geology Today* 36: 113–119.
- [32] **Fearnhead, F. E.**, S. K. Donovan, J. P. Botting, and L. A. Muir. 2020. A Lower Silurian (Llandovery) diplobathrid crinoid (Camerata) from mid-Wales. *Geological Magazine* 157: 1176–1180.
- [33] Donovan, S. K., G. Hoare, N. D. L. Clark, B. Dixon, and **F. E. Fearnhead**. 2024. A new crinoid morphotaxon from the Silurian (Llandovery) of south-west Scotland (Ayrshire). *Scottish Journal of Geology* 60: 1–7.
DOI: 10.1144/sjg2024-007
- [34] Donovan, S. K., Dixon, B., and **F. E. Fearnhead**. 2025. Crinoids from slates in the type area of the

Devonian, south-west England. Bulletin of the Mizunami Fossil Museum 51: 1–4.

DOI: 10.50897/bmfm.51.1_1

[35] Donovan, S. K., B. Dixon, and **F. E. Fearnhead**.

2026. Notes on some borings, Angela Marmont Centre, Natural History Museum, London. Bulletin of the Mizunami Fossil Museum 52: 101–106.

DOI: 10.50897/bmfm.52.1_101

4. New crinoid species erected by Fiona Fearnhead and co-authors

Taxa are arranged in the order of publication. All twenty-one species are from the mid-Palaeozoic (Silurian or Devonian) of the British Isles; see original publications for more precise stratigraphic and other relevant details.

Clematocrinus ramsbottomi Fearnhead *in* Fearnhead and Donovan, 2007 [5]

Petalocrinus bifidus (Bather MS) Donovan and Fearnhead *in* Fearnhead and Donovan, 2007 [5]

Ptychocrinus mullochillensis Fearnhead and Donovan, 2007 [5]

Lanxocolumnus (col.) *geoffnewalli* (Fearnhead and Donovan, 2007) [6] (see also Donovan and Keighley, 2015, 2019)

Calceocrinus nidamentum Donovan, Lewis, Fearnhead and Widdison, 2009 [11]

Chirocrinus broweri Donovan, Lewis, Fearnhead and Widdison, 2009 [11]

Chirocrinus baingowardi Donovan, Widdison, Lewis and Fearnhead, 2010 [11]

Cyathocrinites? fonei Donovan, Widdison, Lewis and Fearnhead, 2010 [11]

‘*Dendrocrinus? whitei*’ Donovan, Widdison, Lewis and Fearnhead, 2010 [11]

Dendrocrinus? johnphillipsi Donovan, Widdison, Lewis and Fearnhead, 2010 [11]

Plicodendrocrinus brevis (Ramsbottom MS) Donovan, Widdison, Lewis and Fearnhead, 2010 [11]

‘*Dendrocrinus? obscurus*’ Donovan, Widdison, Lewis and Fearnhead, 2012 [11]

Periechocrinus? bulbosus (Ramsbottom MS) Donovan, Widdison, Lewis and Fearnhead, 2012 [11]

Carpocrinus verminosus Donovan, Widdison, Lewis and Fearnhead, 2012 [11]

Calliocrinus rugiferus (Ramsbottom MS) Donovan, Widdison, Lewis and Fearnhead, 2012 [11]

Cordylocrinus rugobrachialis (Ramsbottom MS) Donovan, Widdison, Lewis and Fearnhead, 2012 [11]

Pentagonocyclicus (col.) *lamonti* Donovan, Fearnhead, Clarkson and Donovan, 2011 [13]

Oehlerticrinus peachi Donovan and Fearnhead, 2017 [29]

Sidericrinus (col.) *plymouthensis* Donovan and Fearnhead, 2021 [19]

Euptychocrinus longipinnulus Fearnhead, Donovan, Botting and Muir, 2020 [32]

Pentagonopentagonalis (col.) *annulus* Donovan, Hoare, Clark, Dixon and Fearnhead, 2024 [33]

5. Acknowledgements

I thank my reviewer, Dr. John W. M. Jagt (Natuurhistorisch Museum, Maastricht), for his constructive comments.

6. References

- Donovan, S. K. 2009. John Phillips and the British Silurian Crinoidea: 170 years of monographic endeavour. *Proceedings of the Yorkshire Geological Society* 57: 155–164.
- Donovan, S. K. 2023. Obituary: Fiona Elizabeth Fearnhead 1957–2022. *Palaeontological Association Newsletter* 113: 73–74.
- Donovan, S. K., and D. G. Keighley. 2015. A ‘British’ Silurian crinoid from Quinn Point, New Brunswick, eastern Canada. *Proceedings of the Geologists’ Association* 126: 226–231.
- Donovan, S. K., and D. G. Keighley. 2019. A ‘British’ Silurian crinoid from Quinn Point, New Brunswick, eastern Canada: Designation of types. *Proceedings of the Geologists’ Association* 130: 770–771.
- Ramsbottom, W. H. C. 1953. The British Lower Palaeozoic Crinoidea. Unpublished Ph.D. thesis. Chelsea College, University of London. 290 pp.