

## Decision regarding research misconduct

### Decision

The National Board for Assessment of Research Misconduct (“the Board” or “NPOF”) finds [REDACTED] not guilty of research misconduct.

### Background

On 25 March 2022, the Board received a report on alleged research misconduct by Professor Emerita [REDACTED] of the Swedish Museum of Natural History.

The report concerns interpretation and age determination of pollen from fossil angiosperms (flowering plants).

The following articles were reported:

- [REDACTED] Palaeobotanical redux: revisiting the age of the angiosperms. *Nature Plants* 3, 17015 (2017).
- [REDACTED] *Hedyosmum*-like fossils in the Early Cretaceous diversification of angiosperms. *International Journal of Plant Sciences* 180, 232–239, (2019).

The complainant, [REDACTED], criticises interpretation criteria applied by [REDACTED] when she was identifying and interpreted fossil angiosperms. [REDACTED] recommends the use of other interpretation criteria. In his opinion, different criteria may be acceptable as long as they are used consistently, but he thinks [REDACTED] has been inconsistent in applying the criteria. [REDACTED] asserts that criteria of one kind were used in the 2017 article and criteria of an entirely different kind were applied in the 2019 article. [REDACTED] brought the matter to the attention of the *International Journal of Plant Sciences*, but the journal found no reasons for withdrawing the article. In [REDACTED] view, too, the criteria can reduce controversies in this research field if they become accepted.

In a supplementary letter to the Board, [REDACTED] repeats his criticism of [REDACTED] and the interpretation criteria she had used, and states that she had also carried out data manipulation or falsification in her analysis of angiosperms.

█ contests the allegation that she committed research misconduct. In her view, she and several of her colleagues have been subjected to repeated criticism from █ over many years. The criticism from █ increased, █ writes, after the 2017 article was published. In the article, she thinks, criteria previously used to interpret and systematically analyse fossils, including interpretation criteria published by █, were called into question. Specifically, she refutes the accusations of data manipulation or falsification, stating that no precise details were ever printed in the articles concerned. The conclusions are described as tendencies, rather than unequivocal facts, she believes.

## Grounds for decision

### Legal regulation

Under the Swedish Act (2019:504) on responsibility for good research practice and the examination of research misconduct (“the Act”), the Board is tasked to investigate issues of research misconduct. Section 2 of the Act defines research misconduct as a serious breach of good research practice in the form of fabrication, falsification or plagiarism, committed with intent or through gross negligence, in the planning, conduct or reporting of research.

### Planning, conduct or reporting of research

According to the definition in Section 2 of the Act, breaches of good research practice that may constitute research misconduct must have been committed during the planning, conduct or reporting of research. The wording means, according to the preparatory work, that the concept of “misconduct” refers to breaches throughout the research process.<sup>1</sup> “Reporting” refers both to publishing and to other types of disclosure.<sup>2</sup>

The two articles thus constitute “reporting of research”.

### Fabrication, falsification or plagiarism

The Board’s remit is to investigate three forms of research misconduct: fabrication, falsification and plagiarism. These terms are not defined by law, but the preparatory work for the Act refers to the fact that they are described in codes (codices) and guidelines on research ethics, such as *The European Code of Conduct for Research Integrity*.<sup>3,4</sup> They are also explained in the Swedish Research Council’s publication *Good Research Practice*.<sup>5</sup>

Fabrication is often described, according to the preparatory work for the Act, as inventing results and documenting them as if they were genuine. Falsification refers to

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<sup>1</sup> Government Bill 2018/19:58, p. 100,

<sup>2</sup> Government Bill 2018/19:58, p. 49.

<sup>3</sup> *The European Code of Conduct for Research Integrity*, revised edition. Berlin: All European Academies (ALLEA); 2018, section 3.1.

<sup>4</sup> Swedish Government Bill 2018/19:58, pp. 45, 100.

<sup>5</sup> *Good Research Practice*, Swedish Research Council; 2017, Chapter 8.

manipulation of research material, equipment or processes, or unjustified alteration, omission or suppression of information or results. Lastly, plagiarism is defined as a researcher's use of other people's texts, ideas or work without duly acknowledging the original source.<sup>6</sup>

The Board's assessment is that the allegations relate to issues in scientific practice regarding criteria for interpreting empirical material. Evidence that fabrication or falsification is involved has not emerged.

The Board therefore finds [REDACTED] not guilty of research misconduct.

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The Board has made a decision in this case, following presentation by caseworker Magnus Gudmundsson.

Catarina Barketorp  
Chair

Magnus Gudmundsson  
Caseworker

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<sup>6</sup> Swedish Government Bill 2018/19:58, pp. 45, 100.