

**Global tephra studies: role and importance of the international tephra 1 research group  
'Commission on Tephrochronology' in its first 60 years**

Author

Responses to editorial suggestions, including those on the draft MS as yellow sticky notes, and below received 13 May 2022 from Hans Volkert. The article has been substantially restructured (now has 7 sections) and most of the level-3 headers removed (replaced by level-2 headers mainly) as per discussions with HV. It is better balanced. The introduction has been modified, and the section on the project on tephra glass standards has been expanded. Appendix A has been removed with contents instead added to the relevant figure captions in the main text. (Appendix B remains as new Appendix A.) A summary of the final revised structural outline is pasted at the end of this document.

*Hans Volkert (editor)*

*I want to congratulate the co-authoring team led by David Lowe for producing a much better balanced revised manuscript including an improved argumentation about the purpose of the paper and the nature of tephra studies.*

*The explicit table of contents with all the headers (down to level 3) was helpful for checking, but should not be contained in the final version, following the general appearance of HGSS articles. Yet it demonstrates clearly that a few further, more technical, modifications to the structuring have to be undertaken:*

*a) avoid a sequence of headers (of different levels) without text in between. As a minimum one paragraph should introduce the sections of the lower level which follows – this applies to sections 1, 2, 3 and 4 (please have in mind that the published paper is a journal article rather than a technical report);*

These changes have been made with the addition of linking text (introductions) as needed throughout the MS.

*b) level 3 headers can be used, but the leading numerals should be dropped; in that way the overall structure of the article becomes more even;*

Apart from just 3 essential occurrences in Sect. 4, all level-3 headers have gone (replaced by level-2 headers or omitted).

*c) as noted in yellow boxes in the attached file, the header 4.1.1 has to be dropped ;*

Done

*d) the structuring of section 5 has to be revised as noted in the comment box on p.39;*

Done

*e) in line 1533 (reference section), the number of pages should be included;*

Done

*f) it is recommended to sort the honorary members in Table 5 chronologically, to make the succession more explicit (as the list is not too long, particular names can still be detected easily);*

Done

*g) if all figures are inserted with a thin frame (in black or dark grey) their appearance will improve (especially for Fig. 1) and the production department gets a good hint for the final appearance. I have put thin black lines around most of the figures.*

**Revised final structure of paper 18 May 2022 (incorporates edits suggested by Hans Volkert)**

**Global tephra studies: role and importance of the international tephra research group  
‘Commission on Tephrochronology’ in its first 60 years**

**1 Introduction**

- 1.1 What is tephrochronology?
- 1.2 Application of tephrochronology
- 1.3 Defining tephra, cryptotephra
- 1.4 Development of cryptotephra studies and advent of the modern era
- 1.5 Reviewing the Commission on Tephrochronology (COT)

**2 Formation of COT**

- 2.1 Forming COT in 1961
- 2.2 Hosting of commission by INQUA or IAVCEI

**3 Development of the commission through specialist conferences and other activities**

- 3.1 Tokyo, Japan, 1964
- 3.2 Significant change after INQUA Congress, Christchurch, New Zealand, 1973
- 3.3 Laugarvatn and Reykjavík, Iceland, 1980
- 3.4 Mammoth Hot Springs, USA, 1990
- 3.5 Tokyo, Japan, 1993
- 3.6 Hamilton, New Zealand, 1994
- 3.7 Brives-Charenac, France, 1998
- 3.8 Dawson City, Canada, 2005
- 3.9 Kirishima City, Japan, 2010
- 3.10 Moieciu de Sus, Romania, 2018
- 3.11 Other professional activities associated with COT

**4 Officers and membership, key events, and post-2007 funding**

- 4.1 Officers of COT and their roles
- 4.2 Membership of COT
- 4.3 Decline and rise of COT since the 1980s: key events and protagonists
  - COT transforms to CEV*
  - Renaissance from 1987*
  - Growth from 1990s: emergence of modern cryptotephra studies and new techniques*
- 4.4 Funding acquired by INTAV since 2007 and its expenditure

**5 Aims of COT, life membership awards, and communication**

- 5.1 Aims of COT past and present
- 5.2 Honorary life membership awards
- 5.3 Communicating within COT and beyond

**6 Legacies and future of COT**

- 6.1 Development of best practices protocols and databases
- 6.2 Microbeam trace-element characterization of new tephra glass reference material
- 6.3 VOLCORE

**7 Summary and conclusions**

**Acknowledgements**

**References**

**Appendix A**