The Tephra 2014 Workshop was convened on August 4-8, 2014, to discuss major developments, best practices, and future directions in tephra studies. As part of the workshop agenda, a Working Group on Workflow and Best Practices was formed to organize and document the presentations and recommendations made during the workshop. The group focused on data issues, with the aim of facilitating the exchange of information and best practices to improve the accuracy and reliability of tephra studies.

## Workshop Participants

- **Stephen Kuehn**, Anchorage, AK (Chair)
- **Solene Poage**, Buffalo, NY
- **Kris Wallace**, Anchorage, AK
- **Marcus Bank**, University at Buffalo, Buffalo, NY

## Abstract

### Major Theme 1: Recommendations from the break-out sessions

- **Further recommendations**
  - Metadata and documentation of data quality
  - Data access and interoperability
  - Tephrochronology and Volcanism (INTAV) Mike Cummings (Portland State) and Barb Newton demonstrated several new features of Tephrabase designed to aid collaboration & communication and the types of field data that could be used to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

- **Summary of Major Theme:**

  **Major Theme 1:**

  There are two main themes that emerged from the group-breakout sessions. Both themes focus primarily on data issues.

  **Major Theme 2:**

  There is a great need for databases to facilitate information access across disciplines. Standardization (see Table 1 below) is a first step toward greater use of database. The community may wish to work with new or existing database initiatives to improve interoperability (e.g., Tephra 2014 wiki page with workshop report: https://vhub.org/resources/3723/download/Kuehn_Tephra2014_Field_Guide.pdf).

- **Further recommendations**

  - Metadata and documentation of data quality
  - Data access and interoperability
  - Tephrochronology and Volcanism (INTAV)

  Mike Cummings (Portland State) and Barb Newton demonstrated several new features of Tephrabase designed to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

## Program Summary

- **Field trip to Mt. St. Helens:**
  - **Stop 1:**
    - Tungsten and Antler samplings
    - Tephra deposits, including 1980, layer T, set X, layer Wn, set B, set P, layer Yn, and J.
    - Tephrabase on site at Stop 1 (not shown)
  - **Stop 2:**
    - Stop 2 provided exposures of tephra deposits including 1980, layer T, set X, layer Wn, set B, set P, layer Yn, and J.
    - Tephra deposits, including 1980, layer T, set X, layer Wn, set B, set P, layer Yn, and J.

## 5. Field Trip to Mt. St. Helens

- **Stop 1:**
  - Tungsten and Antler samplings
  - Tephra deposits, including 1980, layer T, set X, layer Wn, set B, set P, layer Yn, and J.

## 6. Day 4 Highlights

- **Day 2 began with discussion of tephra stratigraphy and dating methods:**

  This included an overview of the extensive tephra record at Mono Lake, dating tephras by the glass fission-track method, the development of a tephra database to measure tephra fall and glacial transport, and the types of field data that could be used to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

- **Day 2 Highlights**

  - Day 2 opened with talks by two of tephra stratigraphy and dating methods. This included an overview of the extensive tephra record at Mono Lake, dating tephras by the glass fission-track method, the development of a tephra database to measure tephra fall and glacial transport, and the types of field data that could be used to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

- **Day 3 Highlights**

  - Day 3 began with a session on tephra databases and the types of field data that could be used to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

- **Day 4 Highlights**

  - The afternoon consisted of hands-on sessions. A session on correlation methods and uncertainties. This included an overview of the extensive tephra record at Mono Lake, dating tephras by the glass fission-track method, the development of a tephra database to measure tephra fall and glacial transport, and the types of field data that could be used to aid collaboration & communication and the types of field data that were currently available, their use, and development of common standards for documentation and data format.

## 3. Cooperating and Sponsoring Organizations

- **Workshop website:**

  [https://vhub.org/groups/tephra2014/wiki/PresentationVideos](https://vhub.org/groups/tephra2014/wiki/PresentationVideos)

- **轼方田D**

  [https://vhub.org/resources/3729](https://vhub.org/resources/3729)

## 4. Workshop Participants

- **Discussion**

  - Tephra deposits, including 1980, layer T, set X, layer Wn, set B, set P, layer Yn, and J.

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