Comment on *Acarus putrescentiae* Schrank, 1781 (currently *Tyrophagus putrescentiae*; Acariformes, ACARIDAE): proposed conservation of usage by designation of a replacement neotype
(Case 3501; see BZN 67: 24–27; 71: 99–102)

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This is a response to Fan & Zhang’s (BZN 71: 99–102) comment on Case 3501, which involves a conflict between two fundamental principles of zoological nomenclature as embodied in the Code: the Principle of Priority and the need for stability in the use of names. The Introduction of the current Code states, ‘...the Code recognizes that the rigid application of the Principle of Priority may, in certain cases, upset a long-accepted name in its accustomed meaning through the validation of a little-known, or even long-forgotten name. Therefore the rules must enable the Principle of Priority to be set aside on occasions when its application would be destructive of stability or universality, or would cause confusion’.

Here we provide a brief overview of the case, a discussion of the alternative solution (Fan & Zhang, BZN 71: 99–102), evaluate the reaction of the scientific community, and then give a detailed response to Fan & Zhang’s criticism. Throughout the text, we use the following conventions: *Tyrophagus putrescentiae* (common species, = *communis* sensu Fan & Zhang, 2007b) and *Tyrophagus fanetzhangorum* (rare species, = *putrescentiae* sensu Fan & Zhang, 2007b). These two species are genetically distinct and can be easily separated by morphology (Fan & Zhang, 2007; Klimov & O'Connor, 2009) and DNA sequences (Beroiz et al., 2014; Klimov & O'Connor, 2009).

**Case overview**

During the course of a revision of Australasian species of the mite genus *Tyrophagus* Oudemans, 1924, Fan & Zhang (2007b) discovered that two distinct morphospecies had been confused under the name, *Tyrophagus putrescentiae* (Schrank, 1781), an extremely common, cosmopolitan mite of considerable medical and agricultural importance. In their material examined from the region and elsewhere, one of the forms was considered ‘common’ and the other ‘rare’. They determined that the neotype designated for this species by Robertson (1959) and validated by Opinion 1298 (BZN 42: 124–126 (June 1985)) does not correspond to the commoner species but to the rarer species. Strictly applying the Principle of Priority, Fan & Zhang (2007b) applied the name ‘*Tyrophagus putrescentiae*’ to the rare species. Those authors did not follow the provision of Article 75.6, which states, ‘When an author discovers that the existing name-bearing type of a nominal species-group taxon is not in taxonomic accord with the prevailing usage of names and stability or universality..."