A307 Phylogenetic Relationships of *Trichaptum* Based on the RFLP Analysis of Genomic DNAs

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To infer phylogenetic relationships between species of *Trichaptum* (Polyporaceae, Aphyllophorales), RFLP analyses of PCR-amplified DNAs were accomplished. Regions coding for internal transcribed spacers (ITS1-5.8S-ITS2) and parts of mitochondrial SSU rRNAs for 13 strains of 4 *Trichaptum* species (*T. abietinum, T. biforme, T. fusco-violaceum*, and *T. laricinum*) were amplified and digested with *Hpa*II, *Cla*I, *Nsi*I, *Hae*II, *Cfo*I, and *Hin*fI restriction enzymes, ITS regions developed proper sizes and numbers of DNA fragments, but there were no differences in fragment sizes of mitochondrial DNAs among strains. All the characters were coded as 0/1 for absence/presence of fragments. Using Dollo parsimony method, a phylogenetic tree was constructed. While each of *T. laricinum* and *T. biforme* formed an independent group respectively, *T. abietinum* and *T. fusco-violaceum* made mixed groupings among strains. It is infered that *T. abietinum* and *T. fusco-violaceum* have more variations, possibly geographic or phyliological ones, than other species in the genus.

A401 Conflict between Common Cuckoos *Cuculus canorus* and Crow Tits *Paradoxornis webbiana*

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This study was conducted during the 1994 breeding season (April~July) in Puyong-ri, Yangpyong-gun, Kyonggi-do, Korea. The Crow Tit *Paradoxornis webbiana* had two egg-color types, blue and white. The Common Cuckoo *Cuculus canorus* laid blue eggs only in blue clutches of the Crow Tit. Of six nests parasitized by cuckoos, one egg was eliminated by the host, one egg was deserted by the host, two eggs were successful and two cuckoo nestlings disappeared from two nests. On 5 July, a Common Cuckoo visited a Crow Tit nest that had six nestlings, put its head in the nest and eliminated one by one the nestlings outside. When eliminated two nestlings, parent Crow Tit came around the nest with foods for the nestlings. Then, the cuckoo went away by parent Crow Tit with aggressive behavior, as alarm call and mobbing. The cuckoo might eliminated (killed) host's nestlings in order to make breed repeatedly and increase the number of available nest. The cuckoo may be favored the adaptive factors (*e. g.*, similarity of egg color and elimination of host nestlings) in order to leave own offspring. On the other hand, the Crow Tit may be favored a possibility of an evolutionary lag (*e. g.*, disertion of nest, rejection of parasitic egg and two egg-color types) in the cuckoo. The conflict between the cuckoo and the Crow Tit suggests a possibility of an evolutionary equilibrium.