STEM SPECIES PATTERN

The Histiostomatidae are monophyletic and the stem species pattern was reconstructed. The stem species pattern (=groundpattern) consists of all apomorphies and plesiomorphies of the stem species. The following morphological and biological characters are *apomorphies* of the Histiostomatidae. *All stages except the deutonymph*: -- distinctly thinner cuticula than outgroup members, -- existence of the palparmembrane at the distal gnathosoma, shaped by the coxal endites (Fig.4B), -- second visible pedipalp article medianly elongated to the anterior margin of the gnathosoma, -- distal pedipalp articles distinctly directed laterally (Figs4B,7D), propodosoma shield with pattern of cuticular fields as muscle origins (Fig9B), -- ringorgans, homologous to the "genital papillae" of other Astigmata, exist in all non deutonymphal stages (deutonymph with typical unmodified "genital papillae") (Fig11C), -- the Clapared organ of the larva is ringorgan shaped. *Female*: Vulva transverse shaped (Fig11C), -- genital valvae fusion as longitudinal apodeme like structure (Fig9A), -- microorganisms in emulsion as food --. *Male*: Aedeagus (Fig22F) displaced to posterior (Fig11D). *Deutonymph*: Secondary articulation presumably in the femurs of legs III and IV (Figs15B, 16A), caused by this articulation: legs III and IV directed anteriorly when being in transport position, -- sternum between legs III shaped as one single apodeme (Fig.11B). Important morphological and biological *plesiomorphic characters* of *all stages except the deutonymph* are: Digitus mobilis of the chelicera is reduced to a vestigial structure (Fig.4A), -- ventral gnathosoma is completely enclosed by the coxal endites (Fig8i), which are laterally connected to the pedipalps (= synapomorphies of the Guanolichidae and the Histiostomatidae). *Deutonymph*: Adaptations to the phoretic transport are: strongly sclerotized cuticula, -- sucker plate ventrally (Fig.11B), -- whole gnathosoma reduced to a vestigial structure (Fig.11B).