



Fig. 1. Tree of eukaryotes and diversity of plastid-bearing eukaryotes. Top: an unrooted hypothetical phylogeny of eukaryotes based on a synthesis of many gene trees, protein insertions and deletions, and cellular and biochemical characters. In this tree, eukaryotes are divided into five large groups, or "supergroups," within which representatives of the major lineages are shown with their interrelationships as we know them. Dotted lines are plausible but more weakly supported parts of the tree. All groups in which plastids are known from at least a large number of species are indicated by white text on black. Bottom: a small taste of the diversity of plastid-bearing eukaryotes can be seen from one representative of each of the major "algal" lineages. Outside photographs, clockwise from