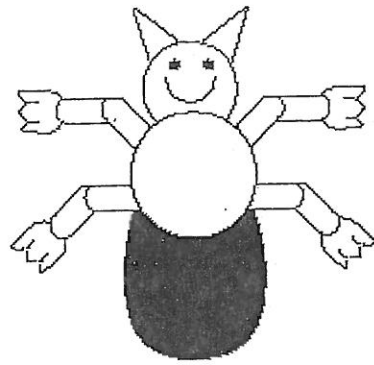
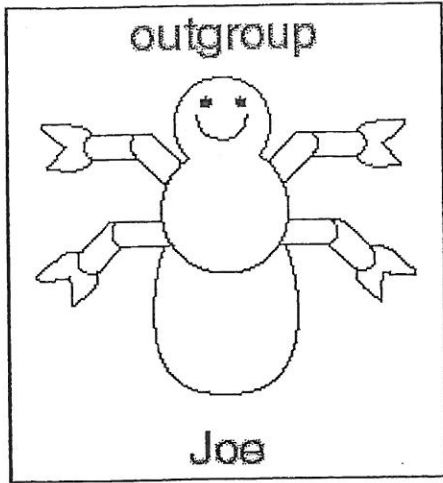
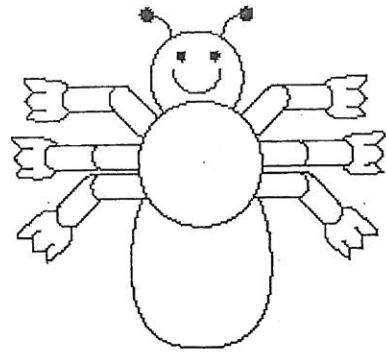


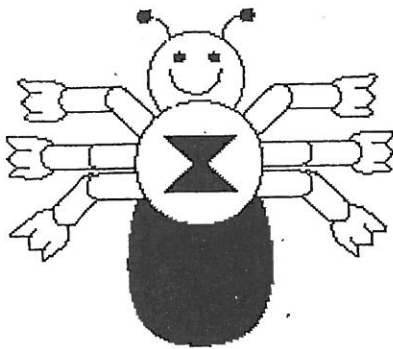
# The Cladisticules



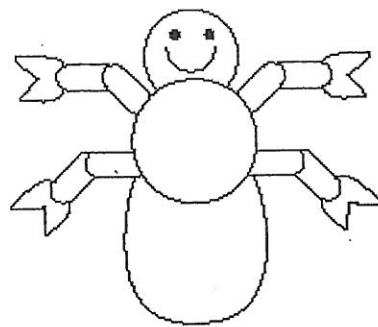
April



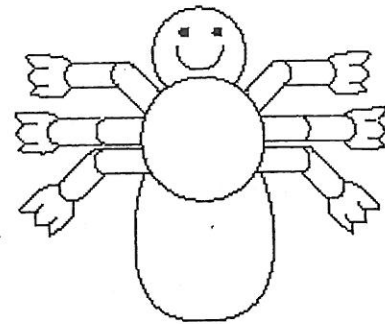
Mike



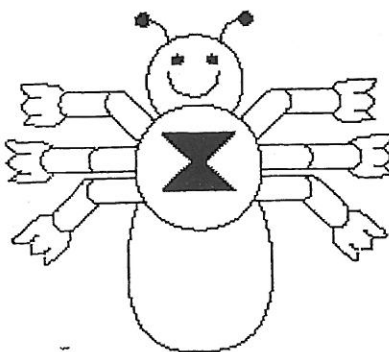
Tanya



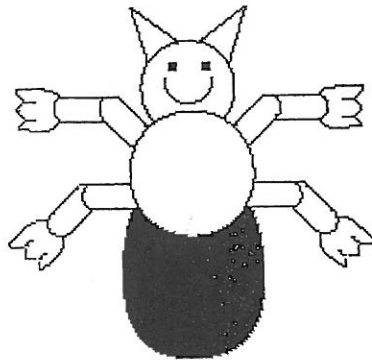
Bobby



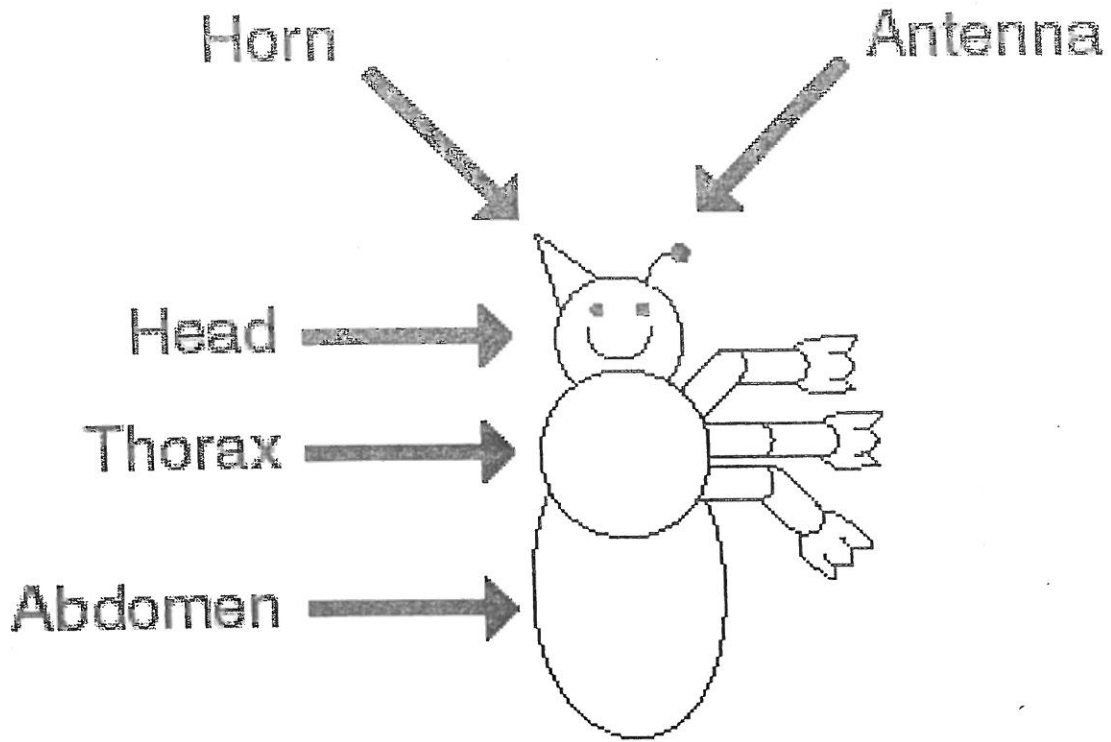
Jason



Jerry



Jane



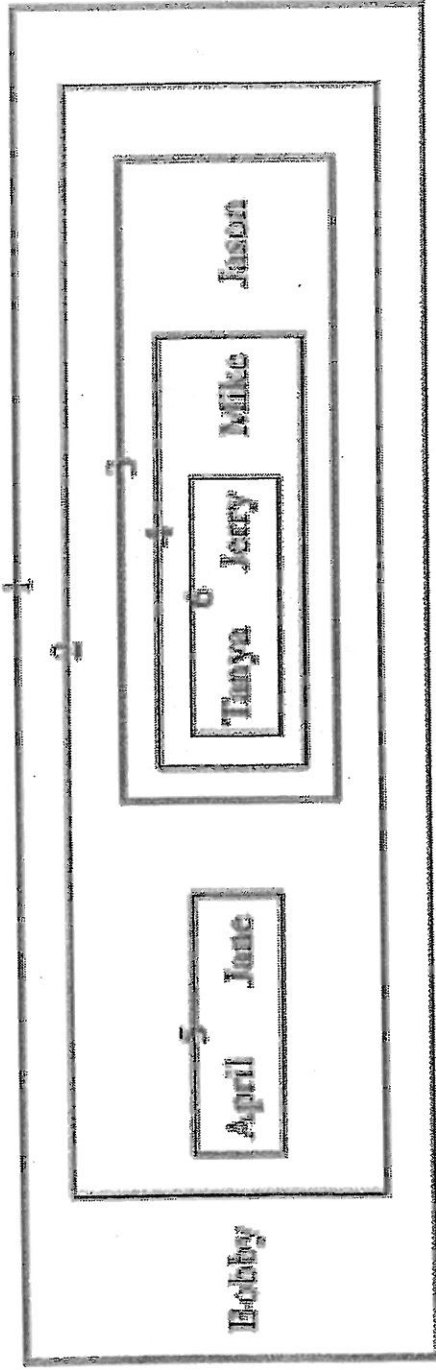
**Anatomy of a Cladisticule**

# Phylogenetic Analysis of the Cladisticules – Data Matrix

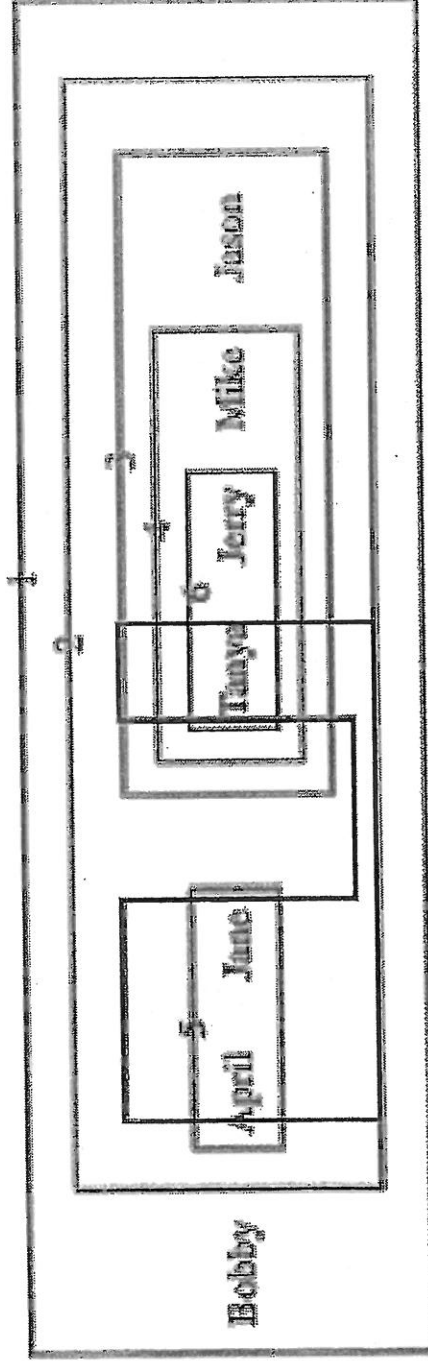
1	2	3	4	5	6	7	
head fused to thorax yes (0) no (1)	feet two toes (0) three toes (1)	numebr of legs four (0) six (1)	antennae absent (0) present (1)	horns absent (0) present (1)	absent (0) present (1)	thorax white (0) hour glass (1)	abdomen white (0) black (1)
Joe (OG)							
April							
Mike							
Tanya							
Bobby							
Jason							
Jerry							
Jane							

# Phylogenetic Analysis of the Cladistics – Data Matrix (solution)

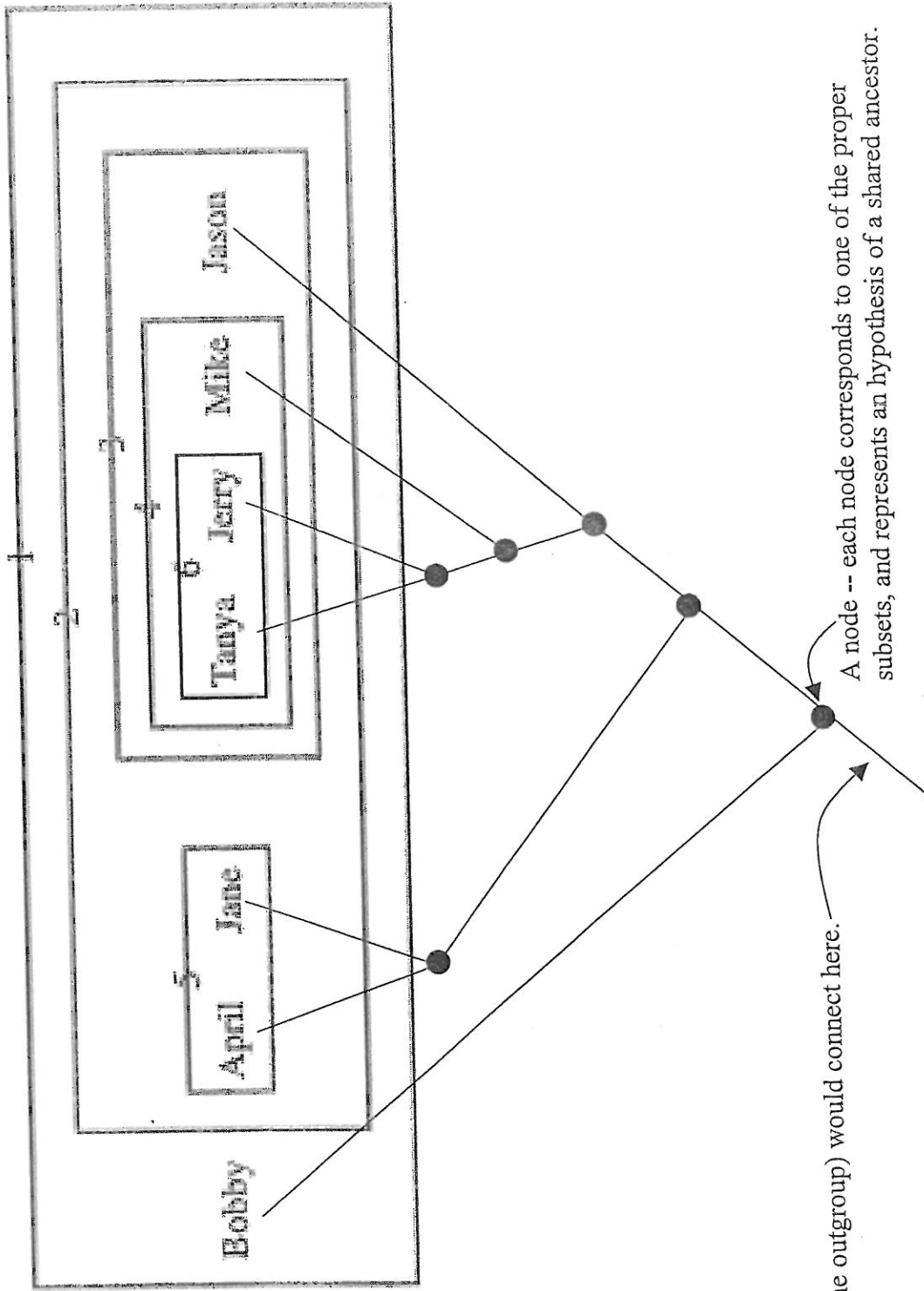
	1	2	3	4	5	6	7	
	head fused to thorax yes (0) no (1)	feet two toes (0) three toes (1)	numebr of legs four (0) six (1)	antennae absent present (1)	horns (0)	absent present (1)	thorax white (0) hour glass (1)	abdomen white (0) black (1)
Joe (OG)	0	0	0	0	0	0	0	0
April	1	1	0	0	1	0	0	1
Mike	1	1	1	1	0	0	0	0
Tanya	1	1	1	1	0	0	1	1
Bobby	1	0	0	0	0	0	0	0
Jason	1	1	1	0	0	0	0	0
Jerry	1	1	1	1	0	0	1	0
Jane	1	1	0	0	1	1	0	1



Illustrating grouping of the cladisticules by shared, derived characters (i.e., shared state "1" in this example).



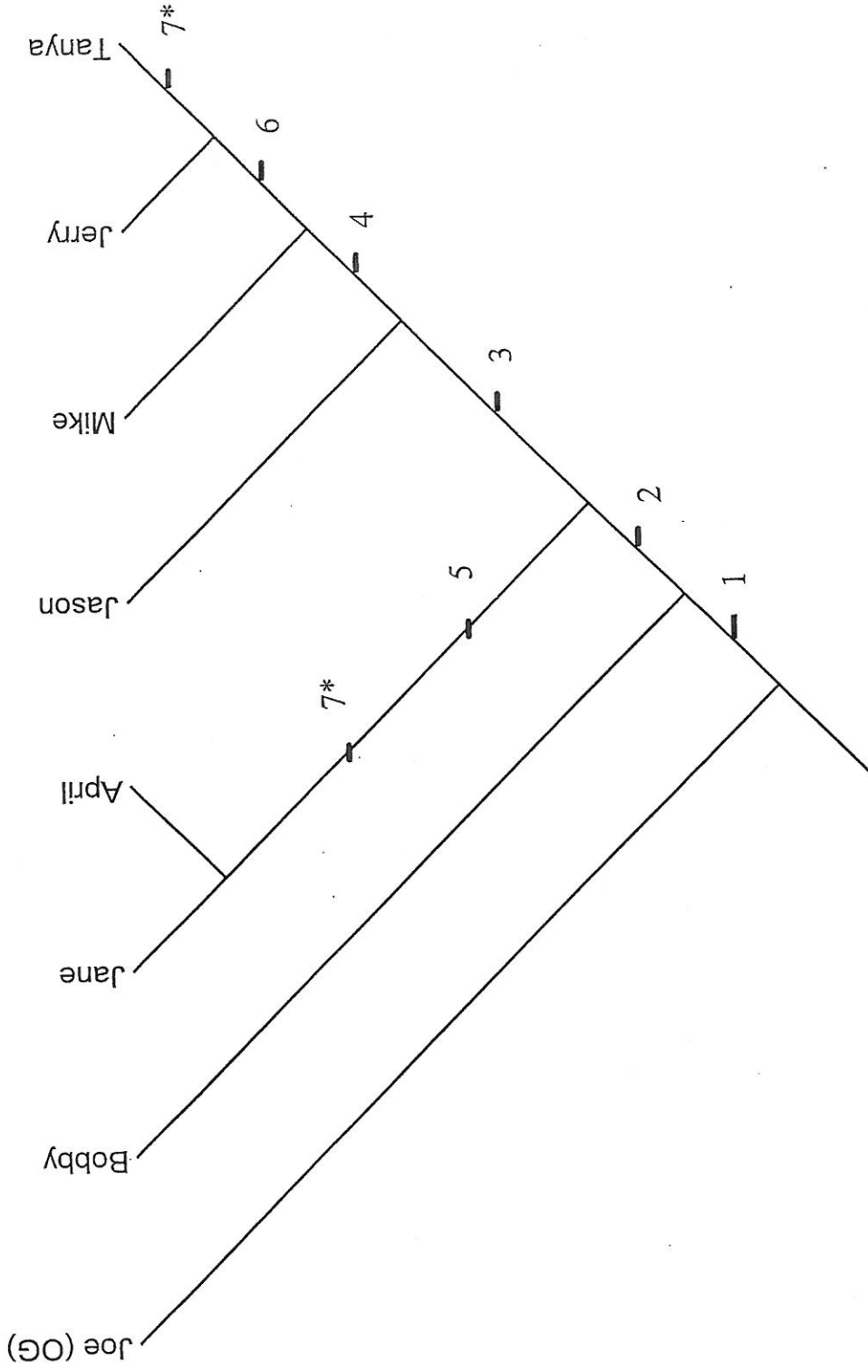
Illustrating a homoplastic character, #7 considered homoplastic because it is incongruent with the other characters.



Joe (the outgroup) would connect here.

A node -- each node corresponds to one of the proper subsets, and represents an hypothesis of a shared ancestor.

**Illustrating how to turn the nested proper subsets into a phylogenetic tree**



The final tree, with tic marks showing where evolutionary changes are inferred to have occurred. \*Note character 7 (the homoplasy) is mapped to two branches.

