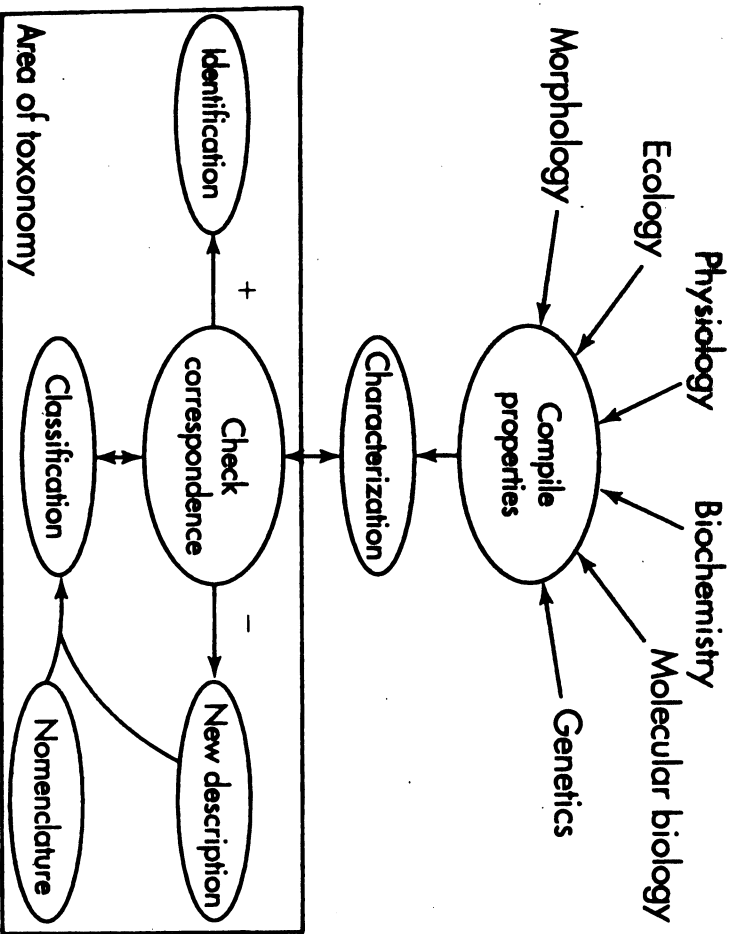
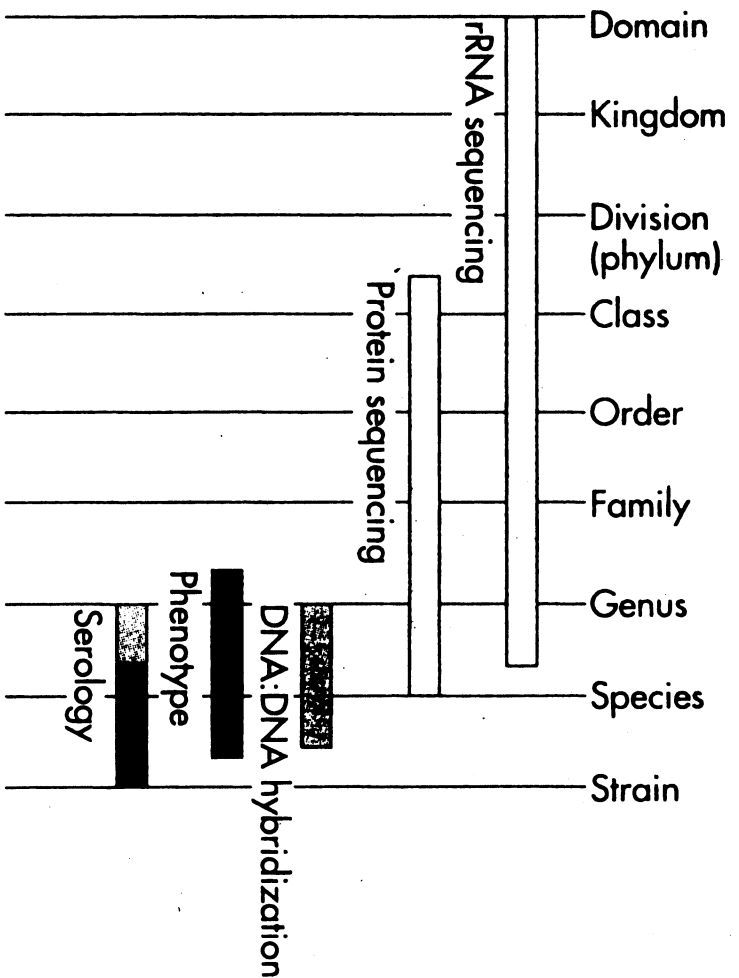


**Table 5.1 Categories of characters used for identification**

<b>Category</b>	<b>Examples</b>
<b>Cultural</b>	<b>Colonial morphology and reactions on differential media</b>
<b>Morphological</b>	<b>Cell shape, Gram reaction, motility</b>
<b>Physiological</b>	<b>Oxidation/fermentation test, growth at 37°C</b>
<b>Biochemical</b>	<b>Acid from carbohydrates, decarboxylase tests; miniaturized rapid test kits with automatic reading and interpretation</b>
<b>Nutritional</b>	<b>Sole carbon and energy sources; miniaturized rapid test kits with automatic reading and interpretation</b>
<b>Chemotaxonomic</b>	<b>Electrophoresis of radiolabelled proteins with automatic scanning and interpretation, automatic analysis and interpretation of whole-organism fatty acids</b>
<b>Serological</b>	<b>Coagglutination, immunofluorescence, enzyme-linked immunosorbent assays</b>
<b>Inhibitory tests</b>	<b>Growth on selective media, inhibition by antibiotic disks</b>
<b>Genotypic</b>	<b>Nucleic acid probes</b>



**Fig. 16-5 Classification.** Classification is an aspect of taxonomy that describes new organisms and places them in an ordered system. It involves sufficient characterization of organisms to determine the identity or novelty of organisms. Classification is linked to identification and nomenclature, which are other aspects of taxonomy.



**Fig. 16-10 Measures Used for Classification.** Various molecular and phenotypic methods are used in polyphasic systems for the classification of microorganisms. rRNA analyses, particularly sequencing of 16S rRNA molecules, provides good information at the level of genus and higher but is not adequate for classification at the species level. Phenotypic analyses are used with rRNA analyses for classification of species.