

CONTENTS

Introduction.....	1
Considerations Influencing the Classification Used in This Edition of the Manual....	4
How Bacteria are Named and Identified.....	15
Division I. <i>Protophyta</i> Sachs, 1874, emend. Krassilnikov, 1949.....	29
Class I. <i>Schizophyceae</i> Cohn, 1879.....	30
Class II. <i>Schizomycetes</i> von Naegeli, 1857.....	33
Order I. <i>Pseudomonadales</i> Orla-Jensen, 1921.....	35
Suborder I. <i>Rhodobacteriineae</i> Breed, Murray and Hitchens, 1944.....	35
Family I. <i>Thiorhodaceae</i> Molisch, 1907.....	38
Genus I. <i>Thiosarcina</i> Winogradsky, 1888.....	39
Genus II. <i>Thiopedia</i> Winogradsky, 1888.....	40
Genus III. <i>Thiocapsa</i> Winogradsky, 1888.....	41
Genus IV. <i>Thiodictyon</i> Winogradsky, 1888.....	41
Genus V. <i>Thiothece</i> Winogradsky, 1888.....	42
Genus VI. <i>Thiocystis</i> Winogradsky, 1888.....	42
Genus VII. <i>Lamprocystis</i> Schroeter, 1886.....	43
Genus VIII. <i>Amoebobacter</i> Winogradsky, 1888.....	44
Genus IX. <i>Thiopolyccoccus</i> Winogradsky, 1888.....	45
Genus X. <i>Thiospirillum</i> Winogradsky, 1888.....	46
Genus XI. <i>Rhabdomonas</i> Cohn, 1875.....	48
Genus XII. <i>Rhodothece</i> Molisch, 1907.....	50
Genus XIII. <i>Chromatium</i> Perty, 1852.....	50
Family II. <i>Athiorhodaceae</i> Molisch, 1907.....	53
Genus I. <i>Rhodopseudomonas</i> Kluyver and van Niel, 1937, emend. van Niel, 1944.....	53
Genus II. <i>Rhodospirillum</i> Molisch, 1907, emend. van Niel, 1944.....	58
Family III. <i>Chlorobacteriaceae</i> Lauterborn, 1913.....	61
Genus I. <i>Chlorobium</i> Nadson, 1912.....	62
Genus II. <i>Pelodictyon</i> Lauterborn, 1913.....	63
Genus III. <i>Clathrochloris</i> Geitler, 1925.....	64
Genus IV. <i>Chlorobacterium</i> Lauterborn, 1915.....	65
Genus V. <i>Chlorochromatium</i> Lauterborn, 1906.....	65
Genus VI. <i>Cylindrogloea</i> Perfiliev, 1914.....	66
Suborder II. <i>Pseudomonadineae</i> Breed, Murray and Smith, <i>sub-or-do nov.</i>	67
Family I. <i>Nitrobacteraceae</i> Buchanan, 1917.....	68
Genus I. <i>Nitrosomonas</i> Winogradsky, 1890.....	68
Genus II. <i>Nitrosococcus</i> Winogradsky, 1892.....	69
Genus III. <i>Nitrosospira</i> Winogradsky, 1931.....	70
Genus IV. <i>Nitrosocystis</i> Winogradsky, 1931.....	70
Genus V. <i>Nitrosogloea</i> H. Winogradsky, 1935.....	71
Genus VI. <i>Nitrobacter</i> Winogradsky, 1892.....	72
Genus VII. <i>Nitrocystis</i> H. Winogradsky, 1935.....	73
Family II. <i>Methanomnadaceae</i> Breed, <i>fam. nov.</i>	74
Genus I. <i>Methanomonas</i> Orla-Jensen, 1909.....	74
Genus II. <i>Hydrogenomonas</i> Orla-Jensen, 1909.....	75
Genus III. <i>Carbozodomonas</i> Orla-Jensen, 1909.....	77
Family III. <i>Thiobacteriaceae</i> Janke, 1924.....	78
Genus I. <i>Thiobacterium</i> Janke, 1924.....	79
Genus II. <i>Macromonas</i> Utermohl and Koppe, 1923.....	80
Genus III. <i>Thiovulum</i> Hinze, 1913.....	81

Genus IV. <i>Thiospira</i> Vislouch, 1914.....	82
Genus V. <i>Thiobacillus</i> Beijerinck, 1904.....	83
Family IV. <i>Pseudomonadaceae</i> Winslow et al., 1917.....	88
Genus I. <i>Pseudomonas</i> Migula, 1894.....	89
Genus II. <i>Xanthomonas</i> Dowson, 1939.....	152
Genus III. <i>Acetobacter</i> Beijerinck, 1898.....	183
Genus IV. <i>Aeromonas</i> Kluver and van Niel, 1936.....	189
Genus V. <i>Photobacterium</i> Beijerinck, 1889, <i>emend.</i> Breed and Lessel, 1954.....	193
Genus VI. <i>Azotomonas</i> Stapp, 1940.....	198
Genus VII. <i>Zymaonas</i> Kluver and van Niel, 1936.....	199
Genus VIII. <i>Protaminobacter</i> den Dooren de Jong, 1926.....	200
Genus IX. <i>Alginomonas</i> Thjøtta and Kåss, 1945.....	202
Genus X. <i>Mycoplana</i> Gray and Thornton, 1928.....	204
Genus XI. <i>Zoogloea</i> Cohn, 1854.....	206
Genus XII. <i>Halobacterium</i> Elazari-Volcani, 1940.....	207
Family V. <i>Caulobacteraceae</i> Henrici and Johnson, 1935, <i>emend.</i> Breed.....	212
Genus I. <i>Caulobacter</i> Henrici and Johnson, 1935.....	213
Genus II. <i>Gallionella</i> Ehrenberg, 1838.....	214
Genus III. <i>Siderophacus</i> Beger, 1944.....	216
Genus IV. <i>Nevskia</i> Famintzin, 1892.....	216
Family VI. <i>Siderocapsaceae</i> Pribram, 1929.....	217
Genus I. <i>Siderocapsa</i> Molisch, 1909.....	218
Genus II. <i>Siderosphaera</i> Beger, 1944.....	220
Genus III. <i>Sideronema</i> Beger, 1941.....	220
Genus IV. <i>Ferribacterium</i> Brussoff, 1916.....	221
Genus V. <i>Sideromonas</i> Cholodny, 1922.....	222
Genus VI. <i>Naumanniella</i> Dorff, 1934.....	223
Genus VII. <i>Ochrobium</i> Perfiliev, 1921.....	225
Genus VIII. <i>Siderococcus</i> Dorff, 1934.....	225
Genus IX. <i>Siderobacter</i> Naumann, 1922.....	226
Genus X. <i>Ferrobacillus</i> Leathen and Braley, 1954.....	227
Family VII. <i>Spirillaceae</i> Migula, 1894.....	228
Genus I. <i>Vibrio</i> Müller, 1773.....	229
Genus II. <i>Desulfovibrio</i> Kluver and van Niel, 1936.....	248
Genus III. <i>Methanobacterium</i> Kluver and van Niel, 1936.....	250
Genus IV. <i>Cellvibrio</i> Winogradsky, 1929.....	250
Genus V. <i>Cellfalcicula</i> Winogradsky, 1929.....	252
Genus VI. <i>Microcylus</i> Ørskov, 1928.....	253
Genus VII. <i>Spirillum</i> Ehrenberg, 1832.....	253
Genus VIII. <i>Paraspirillum</i> Dobell, 1912.....	257
Genus IX. <i>Selenomonas</i> von Prowazek, 1913.....	258
Genus X. <i>Myconostoc</i> Cohn, 1875.....	260
Order II. <i>Chlamydobacteriales</i> Ruchanan, 1917.....	262
Family I. <i>Chlamydobacteriaceae</i> Migula, 1894.....	262
Genus I. <i>Sphaerotilus</i> Kützing, 1833.....	263
Genus II. <i>Leptothrix</i> Kützing, 1843.....	264
Genus III. <i>Toxothrix</i> Molisch, 1925.....	269
Family II. <i>Peloplocaceae</i> Beger, <i>fam. nov.</i>	270
Genus I. <i>Peloploca</i> Lauterborn, 1913.....	270
Genus II. <i>Pelonema</i> Lauterborn, 1915.....	271
Family III. <i>Crenotrichaceae</i> Hansgirt, 1888.....	272
Genus I. <i>Crenothrix</i> Cohn, 1870.....	272

Genus II. <i>Phragmidiothrix</i> Engler, 1883.....	273
Genus III. <i>Clonothrix</i> Roze, 1896.....	274
Order III. <i>Hyphomicrobiales</i> Douglas. <i>ordo nov.</i>	276
Family I. <i>Hyphozieriaceae</i> Babudieri, 1950.....	276
Genus I. <i>Hyphomicrobium</i> Stutzer and Hartleb, 1898.....	277
Genus II. <i>Rhodomicrobium</i> Duchow and Douglas, 1949.....	277
Family II. <i>Pasteuriaceae</i> Laurent. 1890. <i>emend.</i> Henrici and Johnson. 1935.....	278
Genus I. <i>Pasteuria</i> hletchnikoff. 1888.....	279
Genus II. <i>Blastocaulis</i> Henrici and Johnson, 1935.....	279
Order IV. <i>Eubacteriales</i> Buchanan, 1917.....	281
Family I. <i>Azotobacteraceae</i> Bergey, Breed and Murray, 1938.....	283
Genus I. <i>Azotobacter</i> Beijerinck, 1901.....	283
Family II. <i>Rhizobiaceae</i> Conn, 1938.....	285
Genus I. <i>Rhizobium</i> Frank, 1889.....	285
Genus II. <i>Agrobacterium</i> Conn, 1942.....	288
Genus III. <i>Chromobacterium</i> Bergonzini. 1881.....	292
Family III. <i>Achromobacteraceae</i> Breed, 1945.....	296
Genus I. <i>Alcaligenes</i> Castellani and Chalmers, 1919.....	297
Genus II. <i>Achromobacter</i> Bergey et al., 1923.....	300
Genus III. <i>Flavobacterium</i> Bergey et al., 1923.....	309
Genus IV. <i>Agarobacterium</i> Angst, 1929.....	322
Genus V. <i>Beneckea</i> Campbell, <i>gen. nov.</i>	328
Family IV. <i>Enterobacteriaceae</i> Rahn, 1937.....	332
Tribe I. <i>Escherichieae</i> Bergey, Breed and Murray, 1938.....	334
Genus I. <i>Escherichia</i> Castellani and Chalmers, 1919.....	335
Genus II. <i>Aerobacter</i> Beijerinck, 1900.....	341
Genus III. <i>Klebsiella</i> Trevisan. 1885.....	344
Genus IV. <i>Paracolobactrum</i> Borman, Stuart and Wheeler. 1944.....	346
Genus V. <i>Alginobacter</i> Thjøtta and Kåss, 1944.....	348
Tribe II. <i>Erwinieae</i> Winslow et al., 1920.....	349
Genus VI. <i>Erwinia</i> Winslow et al., 1917.....	349
Tribe III. <i>Serratiaeae</i> Bergey, Breed and Murray, 1938.....	359
Genus VII. <i>Serratia</i> Bizio, 1823. <i>emend.</i> Breed and Breed. 1927.....	359
Tribe IV. <i>Proteeae</i> Castellani and Chalmers. 1919.....	364
Genus VIII. <i>Proteus</i> Hauser, 1885.....	364
Tribe V. <i>Salmonelleae</i> Bergey, Breed and Murray. 1938.....	368
Genus IX. <i>Salmonella</i> Lignières, 1900.....	368
Genus X. <i>Shigella</i> Castellani and Chalmers, 1919.....	384
Family V. <i>Brucellaceae</i> , <i>nom. nov.</i>	394
Genus I. <i>Pasteurella</i> Trevisan, 1887.....	395
Genus II. <i>Bordetella</i> Moreno-López, 1952.....	402
Genus III. <i>Brucella</i> Meyer and Shaw, 1920.....	404
Genus IV. <i>Haemophilus</i> Winslow et al., 1917.....	406
Genus V. <i>Actinobacillus</i> Brumpt. 1910.....	414
Genus VI. <i>Calymmatobacterium</i> Aragão and Vianna, 1913.....	418
Genus VII. <i>Morazella</i> Lwoff, 1939.....	419
Genus VIII. <i>Noguchia</i> Olitsky. Syverton and Tyler. 1934.....	421
Family VI. <i>Racteroidaceae</i> Breed. Murray and Smith, <i>fam. nov.</i>	423
Genus I. <i>Bacteroides</i> Castellani and Chalmers. 1919.....	424
Genus II. <i>Fusobacterium</i> Knorr, 1922.....	436
Genus III. <i>Dialister</i> Bergey et al., 1923.....	440
Genus IV. <i>Sphaerophorus</i> Prévot, 1938.....	441
Genus V. <i>Streptobacillus</i> Levaditi. Nicolau and Poincloux. 1925.....	451

Family VII. <i>Micrococcaceae</i> Pribram, 1929.....	454
Genus I. <i>Micrococcus</i> Cohn, 1872.....	455
Genus II. <i>Staphylococcus</i> Rosenbach, 1894.....	464
Genus III. <i>Gaffkya</i> Trevisan, 1885.....	466
Genus IV. <i>Sarcina</i> Goodsir, 1842.....	467
Subgenus I. <i>Zyмосarcina</i> Smit, 1930.....	468
Subgenus II. <i>Methanosarcina</i> Kluyster and van Niel, 1936.....	468
Subgenus III. <i>Sarcinococcus</i> Breed, 1948.....	468
Subgenus IV. <i>Urosarcina</i> Miquel, 1888.....	468
Genus V. <i>Methanococcus</i> Kluyster and van Niel, 1936, <i>emend.</i> Barker, 1936.....	473
Genus VI. <i>Peptococcus</i> Kluyster and van Niel, 1936.....	474
Family VIII. <i>Neisseriaceae</i> Prévot, 1933.....	480
Genus I. <i>Neisseria</i> Trevisan, 1885.....	480
Genus II. <i>Veillonella</i> Prévot, 1933.....	485
Family IX. <i>Brevibacteriaceae</i> Breed, 1953.....	490
Genus I. <i>Brevibacterium</i> Breed, 1953.....	490
Genus II. <i>Kurthia</i> Trevisan, 1885.....	503
Family X. <i>Lactobacillaceae</i> Winslow et al., 1917.....	505
Tribe I. <i>Streptococceae</i> Trevisan, 1889.....	506
Genus I. <i>Diplococcus</i> Weichselbaum, 1886.....	507
Genus II. <i>Streptococcus</i> Rosenbach, 1884.....	508
Genus III. <i>Pediococcus</i> Balcke, 1884, <i>emend.</i> Mees, 1934.....	529
Genus IV. <i>Leuconostoc</i> van Tieghem, 1878, <i>emend.</i> Hucker and Pederson, 1930.....	531
Genus V. <i>Peptostreptococcus</i> Kluyster and van Niel, 1936.....	533
Tribe II. <i>Lactobacilleae</i> Winslow et al., 1920.....	541
Genus I. <i>Lactobacillus</i> Beijerinck, 1901.....	542
Subgenus I. <i>Lactobacillus</i> Beijerinck, 1901.....	543
Subgenus II. <i>Saccharobacillus</i> van Laer, 1892.....	543
Genus II. <i>Eubacterium</i> Prévot, 1938.....	552
Genus III. <i>Catenabacterium</i> Prévot, 1938.....	560
Genus IV. <i>Ramibacterium</i> Prévot, 1938.....	563
Genus V. <i>Cillobacterium</i> Prévot, 1938.....	566
Family XI. <i>Propionibacteriaceae</i> Delwiche, <i>fam. nov.</i>	569
Genus I. <i>Propionibacterium</i> Orla-Jensen, 1909.....	569
Genus II. <i>Butyribacterium</i> Barker and Haas, 1944.....	577
Genus III. <i>Zymobacterium</i> Wachsman and Barker, 1954.....	577
Family XII. <i>Corynebacteriaceae</i> Lehmann and Neumann, 1907.....	578
Genus I. <i>Corynebacterium</i> Lehmann and Neumann, 1896.....	579
Genus II. <i>Listeria</i> Pirie, 1940.....	597
Genus III. <i>Erysipelothrix</i> Rosenbach, 1909.....	599
Genus IV. <i>Microbacterium</i> Orla-Jensen, 1919.....	600
Genus V. <i>Cellulomonas</i> Bergery et al., 1923, <i>emend.</i> Clark, 1952.....	601
Genus VI. <i>Arthrobacter</i> Fischer, 1895, <i>emend.</i> Conn and Dimmick, 1947.....	605
Family XIII. <i>Bacillaceae</i> Fischer, 1895.....	613
Genus I. <i>Bacillus</i> Cohn, 1872.....	613
Genus II. <i>Clostridium</i> Prazmowski, 1880.....	634
*Order V. <i>Actinomycetales</i> Buchanan, 1917.....	694

* Erratum: Due to a clerical error the orders *Caryophanales* and *Actinomycetales* of the class *Schizomycetes* appear in the wrong sequence in numerous places throughout the MANUAL: correctly, *Caryophanales* is Order V and should appear before Order VI, *Actinomycetales* (see pages 12, 33, and 34 for reasons why *Caryophanales* precedes *Actinomycetales* in the classification scheme).

Family I. <i>Mycobacteriaceae</i> Chester, 1901.....	695
Genus I. <i>Mycobacterium</i> Lehmann and Neumann, 1896.....	695
Genus II. <i>Mycococcus</i> Krassilnikov, 1938.....	707
Family II. <i>Actinomycetaceae</i> Buchanan, 1918.....	713
Genus I. <i>Nocardia</i> Trevisan, 1889.....	713
Genus II. <i>Actinomyces</i> Harz, 1877.....	742
Family III. <i>Streptomycetaceae</i> Waksman and Henrici, 1943.....	744
Genus I. <i>Streptomyces</i> Waksman and Henrici, 1943.....	744
Genus II. <i>Micromonospora</i> Ørskov, 1923.....	822
Genus III. <i>Thermoactinomyces</i> Tsiklinsky, 1899.....	824
Family IV. <i>Actinoplanaceae</i> Couch, 1955.....	825
Genus I. <i>Actinoplanes</i> Couch, 1950.....	826
Genus II. <i>Streptosporangium</i> Couch, 1955.....	828
Order VI. <i>Caryophanales</i> Peshkoff, 1940.....	830
Family I. <i>Caryophanaceae</i> Peshkoff, 1940.....	830
Genus I. <i>Caryophanon</i> Peshkoff, 1940.....	831
Genus II. <i>Lineola</i> Pringsheim, 1950.....	832
Genus III. <i>Simonsiella</i> Schmid, 1922.....	833
Family II. <i>Oscillospiraceae</i> Peshkoff, 1940.....	834
Genus I. <i>Oscillospira</i> Chatton and Pérard, 1913.....	834
Family III. <i>Arthromitaceae</i> Peshkoff, 1940.....	835
Genus I. <i>Arthromitus</i> Leidy, 1849.....	835
Genus II. <i>Coleomit</i> Duboscoq and Grassé, 1930.....	836
Order VII. <i>Beggiatoales</i> Buchanan, <i>ordo nov.</i>	837
Family I. <i>Beggiatoaceae</i> Migula, 1894.....	837
Genus I. <i>Beggialoa</i> Trevisan, 1842.....	838
Genus II. <i>Thiospirillopsis</i> Uphof, 1927.....	840
Genus III. <i>Thioploca</i> Lauterborn, 1907.....	841
Genus IV. <i>Thiothriz</i> Winogradsky, 1888.....	842
Family II. <i>Vitreoscillaceae</i> Pringsheim, 1949.....	844
Genus I. <i>Vitreoscilla</i> Pringsheim, 1951.....	845
Genus II. <i>Bactoscilla</i> Pringsheim, 1951.....	848
Genus III. <i>Microscilla</i> Pringsheim, 1951.....	849
Family III. <i>Leucotrichaceae</i> Buchanan, <i>fam. nov.</i>	850
Genus I. <i>Leucothriz</i> Oersted, 1844, <i>emend.</i> Harold and Stanier, 1955.....	850
Family IV. <i>Achromatiaceae</i> Massart, 1902.....	851
Genus I. <i>Achromatium</i> Schewiakoff, 1893.....	852
Order VIII. <i>Myzobacteriales</i> Jahn, 1915.....	854
Family I. <i>Cytophagaceae</i> Stanier, 1940.....	858
Genus I. <i>Cytophaga</i> Winogradsky, 1929.....	858
Family II. <i>Archangiaceae</i> Jahn, 1924.....	863
Genus I. <i>Archangium</i> Jahn, 1924.....	863
Genus II. <i>Stelangium</i> Jahn, 1915.....	866
Family III. <i>Sorangiaceae</i> Jahn, 1924.....	866
Genus I. <i>Sorangium</i> Jahn, 1924.....	866
Family IV. <i>Polyangiaceae</i> Jahn, 1924.....	870
Genus I. <i>Polyangium</i> Link, 1809.....	870
Genus II. <i>Synangium</i> Jahn, 1924.....	877
Genus III. <i>Podangium</i> Jahn, 1924.....	877
Genus IV. <i>Chondromyces</i> Berkeley and Curtis, 1874.....	879
Family V. <i>Myzococcaceae</i> Jahn, 1924.....	882
Genus I. <i>Myzococcus</i> Thaxter, 1892.....	883
Genus II. <i>Chondrococcus</i> Jahn, 1924.....	886

Genus III. <i>Angiococcus</i> Jahn, 1924.....	889
Genus IV. <i>Sporocytophaga</i> Stanier, 1940.....	890
Order IX. <i>Spirochaetales</i> Buchanan, 1918.....	892
Family I. <i>Spirochaetaceae</i> Swellengrebel, 1907.....	892
Genus I. <i>Spirochaeta</i> Ehrenberg, 1833.....	893
Genus II. <i>Saprosira</i> Gross, 1911.....	894
Genus III. <i>Cristispira</i> Gross, 1910.....	895
Family II. <i>Treponemataceae</i> Robinson, 1948.....	896
Genus I. <i>Borrelia</i> Swellengrebel, 1907.....	897
Genus II. <i>Treponema</i> Schaudinn, 1905.....	904
Genus III. <i>Leptospira</i> Noguchi, 1917.....	907
Order X. <i>Mycoplasmatales</i> Freundt, 1955.....	914
Family I. <i>Mycoplasmataceae</i> Freundt, 1955.....	914
Genus I. <i>Mycoplasma</i> Nowak, 1929.....	914
Addendum to Class II, <i>Schizomyces</i> von Naegeli. Bacteria symbiotic or parasitic in protozoa.....	926
Class III. <i>Microtubotibes</i> Philip, 1956.....	931 and 933
Order I. <i>Rickettsiales</i> Buchanan and Buchanan, 1938, <i>emend.</i> Gieszczykiewicz, 1939	934
Family I. <i>Rickettsiaceae</i> Pinkerton, 1936.....	934
Tribe I. <i>Rickettsieae</i> Philip, <i>trib. nov.</i>	935
Genus I. <i>Rickettsia</i> da Rocha-Lima, 1916.....	935
Subgenus A. <i>Rickettsia</i> Philip, 1943.....	937
Subgenus B. <i>Zinssera</i> Macchiavello, 1947.....	939
Subgenus C. <i>Dermacentrozenus</i> (Wolbach, 1919) Philip, 1943.....	941
Subgenus D. <i>Rochalimaea</i> Macchiavello, 1947.....	945
Genus II. <i>Coziella</i> Philip, 1948.....	947
Tribe II. <i>Ehrlichieae</i> Philip, <i>trib. nov.</i>	948
Genus III. <i>Ehrlichia</i> Moshkovskiy, 1945.....	949
Genus IV. <i>Cowdria</i> Moshkovskiy, 1945.....	950
Genus V. <i>Neorickettsia</i> Philip et al., 1953.....	951
Tribe III. <i>Wolbachieae</i> Philip, 1956.....	952
Genus VI. <i>Wolbachia</i> Hertig, 1936.....	953
Genus VII. <i>Symbiotes</i> Philip, 1956.....	956
Genus VIII. <i>Rickettsiella</i> Philip, 1956.....	957
Family II. <i>Chlamydiaceae</i> Rake, <i>fam. nov.</i>	957
Genus I. <i>Chlamydia</i> Rake, 1956.....	958
Genus II. <i>Colesiota</i> Rake, 1948.....	959
Genus III. <i>Ricolesia</i> Rake, <i>gen. nov.</i>	959
Genus IV. <i>Colettsia</i> Rake, <i>nom. nov.</i>	961
Genus V. <i>Miyagawanella</i> Brumpt, 1938.....	961
Family III. <i>Bartonellaceae</i> Gieszczykiewicz, 1939.....	968
Genus I. <i>Bartonella</i> Strong, Tyzzer and Sellards, 1915.....	969
Genus II. <i>Grahamella</i> Brumpt, 1911.....	971
Genus III. <i>Haemobartonella</i> Tyzzer and Weinman, 1939.....	972
Genus IV. <i>Eperythrozoon</i> Schilling, 1928.....	977
Family IV. <i>Anaplasmataceae</i> Yakimov, 1931.....	980
Genus I. <i>Anaplasma</i> Theiler, 1910.....	981
Order II. <i>Virales</i> Breed, Murray and Hitchens, 1944.....	985
Artificial Key.....	987
Index of Genera and Species.....	1093