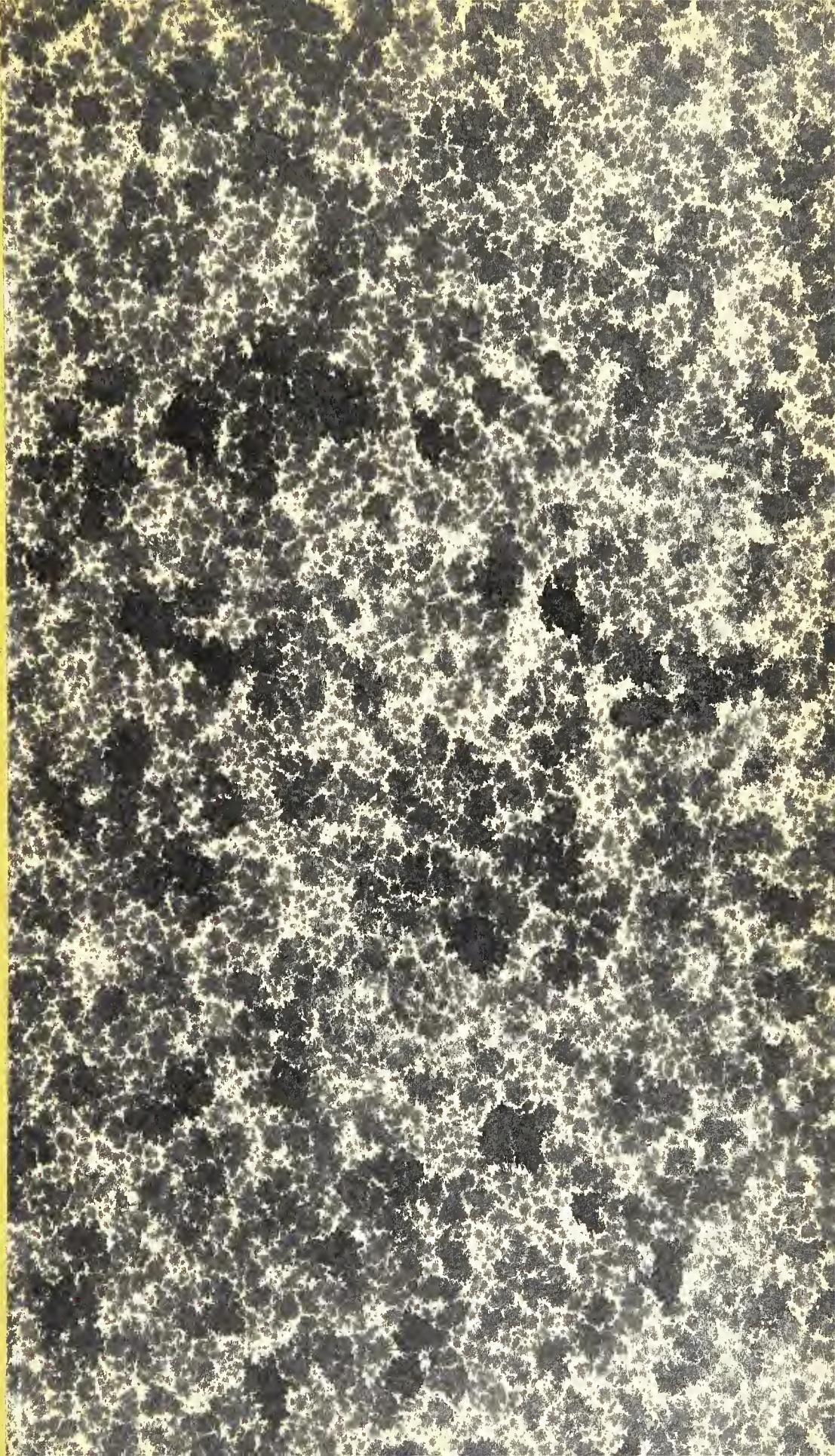


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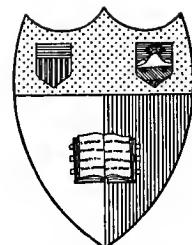


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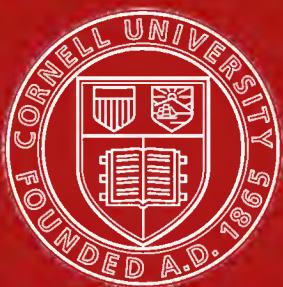
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# Mathematics

Classification by Richard Bliss, Librarian of Redwood Library,  
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## SYNOPSIS

General  LB

Arithmetic  LC

Algebra  LD

Theory of numbers  LDS-LDZ

Calculus of probability, etc.  LE-LEH

Numerical computation  LEI-LEK

Mathematical recreations  LEL-LEY

Analysis  LF

Infinitesimal calculus  LFA

Differential and integral calculus  LFB-LFD

Differential equations  LFE

Calculus of finite differences  LFG

Boundary value problems  LFH

Calculus of variations  LFL

Functions  LFM-LFY

Geometry  LG

General topics (Topology, etc.)  LG-LGAY

Empirical geometry  LGAZ

Greek synthetic  LGB

Synthetic geometry of Guldin, etc. LGBG

Elementary geometry LGBJ-LGCZ

Trigonometry LGD

Modern synthetic (Pure geometry) LGE

Practical geometry (Geometrography) LGFN-LGFY

Geometry of position (Carnot) LGFZ

Geometry of transformation LGG

Descriptive LGH-LGHH

Projective LGHI-LGIZ

Application of algebra and analysis to geometry LGJ

Vector analysis LGE-LGK

Quaternions LGG

Directional calculus (Ausdehnungslehre) LGJJ

Algebraic geometry (Analytical geometry) LGK-LGS

Geometry of line and sphere in space LGT

Enumerative geometry LGU-LGUH

Geometry of n-dimensional space LGUI-LGUY

Differential geometry LGV-LGX

Absolute (non-Euclidean) geometry LGY

Kinematics, Motion LGZ

Philosophy, Principles *See* L<sub>BA</sub>

L<sub>B·1</sub> Study, Instruction (Mathematical pedagogics)

L<sub>B·2</sub> Bibliography

*Better in* Bibliography

L<sub>B·4</sub> History

~ *Better in* L<sub>BB</sub>

L<sub>B·5</sub> Dictionaries

L<sub>B·6</sub> Tables

*Better in* L<sub>BI</sub>-L<sub>BV</sub> except in very small collections

L<sub>B·7</sub> Periodicals

L<sub>B·8</sub> Societies, Congresses

L<sub>B·9</sub> Collections of works by several authors

## L<sub>B</sub> General and miscellaneous works

( Including Higher Mathematics ; an alternative place in L<sub>EYZ</sub>)

L<sub>BA</sub> Philosophy, principles

## L<sub>BB</sub> History of mathematics

Subdivision by periods and countries

L<sub>BBA</sub> Antiquity

L<sub>BCC</sub> Egyptians

L<sub>BCE</sub> Babylonians and Chaldeans

L<sub>BBG</sub> Hindus and Chinese

L<sub>BBI</sub> Greeks

L<sub>BBK</sub> Romans

L<sub>BBM</sub> Middle ages

L<sub>BBO</sub> Arabs

L<sub>BBU</sub> Europe

L<sub>BBY</sub> Renaissance and modern

This will not need country subdivisions

### **Subdivision by subjects**

Or the history of each subject may be put under the subject, e. g.:

L<sub>C4</sub> History of arithmetic

L<sub>D4</sub> History of algebra

L<sub>F14</sub> History of the calculus of variations

L <sub>BC</sub>	Arithmetic
L <sub>BD</sub>	Algebra
L <sub>BDA</sub>	Theory of functions
L <sub>BDS</sub>	Theory of numbers
L <sub>BE</sub>	Calculus of probability and adjustment
L <sub>BF</sub>	Analysis
L <sub>BFA</sub>	Infinitesimal analysis
L <sub>BFB</sub>	Differential and integral calculus
L <sub>BFC</sub>	Differential equations
L <sub>BFF</sub>	Calculus of finite differences
L <sub>BFI</sub>	Calculus of variations
L <sub>BFO</sub>	Theory of functions
L <sub>BG</sub>	Geometry
L <sub>BGA</sub>	Empirical
L <sub>BGI</sub>	Greek synthetic
L <sub>BGBA</sub>	Ionic school
L <sub>BGBB</sub>	School of Pythagoras
L <sub>BGBC</sub>	Sophist school
L <sub>BGBD</sub>	Platonic school
L <sub>BGBE</sub>	First Alexandrian school
L <sub>BGG</sub>	Modern synthetic
L <sub>BGU</sub>	Analytical (Coordinate)
L <sub>BGZ</sub>	Non-Euclidean
L <sub>BH</sub>	Applied mathematics (general works only)

## **LBI Mathematical tables**

### **LBK Arithmetical**

L <sub>BKA</sub>	Multiplication
L <sub>BKE</sub>	Divisor (Factor) and Primes
L <sub>BKI</sub>	Quarter squares
L <sub>BKL</sub>	Squares, cubes, square and cube roots
L <sub>BKO</sub>	Higher powers
L <sub>BKS</sub>	Triangular numbers
L <sub>BKU</sub>	Reciprocals
L <sub>BKY</sub>	Vulgar fractions as decimals

L <sub>BL</sub>	Logarithmic and circular (Trigonometrical)
L <sub>BIA</sub>	Logarithms of numbers
L <sub>BIC</sub>	Circular functions (sines, cosines, tangents); Logarithmic-trigonometrical functions
L <sub>BIE</sub>	Natural
L <sub>BIG</sub>	Logarithmic
L <sub>BLI</sub>	Exponential
L <sub>BLK</sub>	Hyperbolic logarithms (Napier's logarithms)
L <sub>BLL</sub>	Hyperbolic sines and cosines
L <sub>BIN</sub>	Natural
L <sub>BLO</sub>	Logarithmic
L <sub>BLP</sub>	Conversion of Briggsian and Hyperbolic logarithms
L <sub>BLR</sub>	Antilogarithms
L <sub>BLS</sub>	Addition and subtraction logarithms (Gaussian logarithms)
L <sub>BLT</sub>	Logistic logarithms
L <sub>BLU</sub>	Proportional logarithms
L <sub>BLV</sub>	Interpolation tables
L <sub>BLY</sub>	Dual logarithms
L <sub>BQ</sub>	Mensuration
L <sub>BR</sub>	Mathematical constants
L <sub>BRE</sub>	Transcendental
L <sub>BS</sub>	Algebraic constants
L <sub>BSA</sub>	Bernoulli numbers
L <sub>BSE</sub>	Binomial theorem coefficients
L <sub>BST</sub>	Irreducible cubic equations
L <sub>BSO</sub>	Figurate numbers
L <sub>BSS</sub>	Trigonometrical quadratic surds
L <sub>BST</sub>	Circular decimals
L <sub>BSTU</sub>	Hyperbolic antilogarithms
L <sub>BSY</sub>	Factorials
L <sub>BT</sub>	Transcendental functions
L <sub>BTA</sub>	Elliptic
L <sub>BTE</sub>	Gamma
L <sub>BTI</sub>	Legendrian coefficients
L <sub>BTO</sub>	Bessel's
L <sub>BTS</sub>	Sine, cosine and exponential
L <sub>BTU</sub>	Logarithmic transcendental
L <sub>BTV</sub>	Non-numerical integrals
L <sub>BU</sub>	Theory of numbers
L <sub>BUA</sub>	Divisors and primes
L <sub>BUE</sub>	Canon arithmeticus
L <sub>BUI</sub>	Pellian equation
L <sub>BUO</sub>	Partition
L <sub>BUC</sub>	Binary, ternary, quadratic, etc.
L <sub>BV</sub>	Miscellaneous
L <sub>BVA</sub>	Combinations
L <sub>BVE</sub>	Permutations

## **L<sub>BW</sub>** Problems, syllabi, examination papers, collections

The problems on special topics are at the end of the topic

- L<sub>BX</sub>** Calculus of logic, logic and mathematics
- L<sub>BY</sub>** Mathematical symbols, Pasigraphy
- L<sub>BZ</sub>** Algorisms (Algorithms)

## **Lc** Arithmetic\*

- L<sub>CA</sub>** Number concept, numbers and numbering
- L<sub>CB</sub>** Pythagorean numbers
- L<sub>CC</sub>** Positive and negative quantities
- L<sub>CD</sub>** Proportion
- L<sub>CE</sub>** Factors
- L<sub>CF</sub>** Prime numbers.

*See also L<sub>BUA</sub>, L<sub>DTA</sub>*

- L<sub>CG</sub>** Fractions
- L<sub>CH</sub>** Decimal fractions
- L<sub>CI</sub>** Irrational numbers (Surds)
- L<sub>CIA</sub>** Algebraic
- L<sub>CID</sub>** Transcendental
- L<sub>CIR</sub>** Rationalization

- L<sub>CJ</sub>** Complex numbers
- L<sub>CJE</sub>** Imaginary quantities
- L<sub>CJI</sub>** Graphic representation
- L<sub>CJO</sub>** Quaternions

*See also L<sub>GID</sub>*

- L<sub>CK</sub>** Doctrine of mass of points, Aggregation
- L<sub>CL</sub>** Transfinite numbers
- L<sub>CM</sub>** Doctrine of limits
- L<sub>CME</sub>** Exhaustions

*See also L<sub>GBH</sub>*

\* The boundaries of Arithmetic and Algebra are not well defined, and a few of the topics included under this head are sometimes placed in Algebra

L <sub>CN</sub>	Infinite processes
L <sub>CO</sub>	Series, Infinite series
L <sub>COA</sub>	Convergence and divergence
L <sub>COB</sub>	Progression
L <sub>COE</sub>	Transformation
L <sub>COG</sub>	Arithmetical series
L <sub>COT</sub>	Geometrical series
L <sub>COH</sub>	Harmonic series
L <sub>CON</sub>	Recurring series
L <sub>COO</sub>	Bernoullian numbers
L <sub>COP</sub>	Power series
L <sub>COR</sub>	Fourier's (trigonometric) series
L <sub>COT</sub>	Hypergeometric series
L <sub>COV</sub>	Sterling's series
L <sub>COX</sub>	Interpolation
	<i>See also L<sub>DAR</sub></i>
L <sub>COY</sub>	Mean value
	<i>See also L<sub>EAV</sub></i>
L <sub>CP</sub>	Infinite product
L <sub>CPE</sub>	Faculties and factorials
L <sub>CQ</sub>	Continued fractions
L <sub>CQE</sub>	Partial fractions
L <sub>CQT</sub>	Infinite determinants
	<i>See also L<sub>DIX</sub></i>
L <sub>CQR</sub>	Infinite processes with complex terms
L <sub>CR</sub>	Combinatorial analysis (Kombinatorik)
L <sub>CRG</sub>	Combination. Permutation
L <sub>CRH</sub>	Inversion. Transposition
L <sub>CRO</sub>	Applications
L <sub>CS</sub>	Distribution function
L <sub>CT</sub>	Theory of partitions
L <sub>CTA</sub>	Sylvester's graphic method
L <sub>CTE</sub>	Extension to three dimensions
L <sub>CU</sub>	Method of differential operators
L <sub>CV</sub>	Binomial theorem. Binomial coefficient
L <sub>CW</sub>	Polynomial theorem
L <sub>CX</sub>	Figurate numbers
L <sub>CY</sub>	Groups. Finite discrete groups
L <sub>CYA</sub>	Group theory
L <sub>CYE</sub>	Substitutions
L <sub>CYI</sub>	Substitution groups
L <sub>CZ</sub>	Problems

# L<sub>D</sub> Algebra

LDA	Theory of functions
L <sub>DAA</sub>	Theory of limits
L <sub>DAE</sub>	Eliminants
L <sub>DAI</sub>	Divisor system
L <sub>DAO</sub>	Whole functions (Polynomials)
L <sub>DAP</sub>	One variable
L <sub>DAQ</sub>	Several variables
L <sub>DAR</sub>	Rational functions <i>See also Lcox</i>
L <sub>DAS</sub>	One variable
L <sub>DAT</sub>	Several variables
L <sub>DAY</sub>	Continuous and discontinuous functions
L <sub>DAZ</sub>	Systematic functions
LDB	Arithmetical theory of algebraic quantities
L <sub>DBE</sub>	Conjugate bodies
LDC	Algebraic forms (Algebraic configuration; Quantics)
L <sub>DCA</sub>	Modulus system
L <sub>DCB</sub>	Theorems
L <sub>DCC</sub>	Binary forms Transvection. Transvectants
L <sub>DCA</sub>	Evection process
L <sub>DCE</sub>	Associated forms
L <sub>DCC</sub>	Invariants and covariants
L <sub>DCE</sub>	Special forms and groups Combinants
L <sub>DCF</sub>	Resultants
D <sub>DCG</sub>	
L <sub>DCN</sub>	Discriminants
L <sub>DCR</sub>	Seminvariants
L <sub>DCT</sub>	Reciprocants
L <sub>DCK</sub>	Systems of invariants
L <sub>DCL</sub>	Relationship of forms Associated forms
L <sub>DCLA</sub>	Canonical forms (Canonizants)
L <sub>DCLB</sub>	Inversion problems
L <sub>DCM</sub>	Invariant processes
L <sub>DCN</sub>	Apolarity
L <sub>DCO</sub>	Automorphic binary forms
L <sub>DCP</sub>	Correlation principle Hesse's determinant <i>See LDDQ</i>
	Functional (Jacobeian) determinant <i>See LDDP</i>
L <sub>DQG</sub>	Enumerating generating functions
L <sub>DQR</sub>	Perpetuants
L <sub>DQS</sub>	Simultaneous seminvariants of two binary forms
L <sub>DQT</sub>	Two binary forms

L <sub>DCR</sub>	Restricted substitutions
L <sub>DCRO</sub>	Orthogonal system
L <sub>DCTS</sub>	Quadratic forms
L <sub>DCT</sub>	Bilinear
L <sub>DCU</sub>	Ternary quadratic
L <sub>DCV</sub>	Ternary cubic
L <sub>DCW</sub>	Ternary of the fourth order
L <sub>DCX</sub>	Quaternary quadratic
L <sub>DCY</sub>	Quaternary cubic
L <sub>DCZ</sub>	Automorphic ternary, quaternary, etc.
L <sub>DD</sub>	Determinants
L <sub>DDA</sub>	Laplace's formula
L <sub>DDB</sub>	Compound determinants
L <sub>DDC</sub>	Symmetric
L <sub>DDE</sub>	Recurring (Orthosymmetric, Hankel's)
L <sub>DDF</sub>	Persymmetric
L <sub>DDG</sub>	Circulant (Double orthosymmetric)
L <sub>DDH</sub>	Skew symmetric (Semisymmetric)
L <sub>DDI</sub>	Skew
L <sub>DDJ</sub>	Jacobi's symbol
L <sub>DDK</sub>	Centrosymmetric
L <sub>DDL</sub>	Special forms
L <sub>DDLB</sub>	Vandermonde's (Cauchy's)
L <sub>DDLC</sub>	Continuant
L <sub>DDLF</sub>	Zeipel's
L <sub>DDLI</sub>	Stern's
L <sub>DDLK</sub>	Smith's
	Other special determinants
L <sub>DDN</sub>	Functional
L <sub>DDO</sub>	Wronski's
L <sub>DDP</sub>	Jacobi's ("Functional")
L <sub>DDQ</sub>	Hesse's
L <sub>DDR</sub>	Resultant
L <sub>DDS</sub>	Discriminant
L <sub>DDU</sub>	Cubic
L <sub>DDV</sub>	Determinants of higher order
L <sub>DDX</sub>	Infinite <i>See also L<sub>CQI</sub></i>
L <sub>DDY</sub>	Matrices

L <sub>D</sub> E	Algebraic equations
L <sub>DF</sub>	Transformation and reduction
L <sub>DG</sub>	Resultants and discriminants
L <sub>DH</sub>	Systems of linear equations
L <sub>DI</sub>	Solution of equations
L <sub>DI</sub> A	Quadratic (equation of 2nd degree)
L <sub>DI</sub> C	Cubic " 3rd "
L <sub>DI</sub> B	Biquadratic " 4th "
L <sub>DI</sub> Q	Quintic " 5th "
L <sub>DI</sub> I	Equation of the 6th degree
L <sub>DK</sub>	Binomial (Cyclotomic)
L <sub>DM</sub>	Reciprocal
L <sub>DR</sub>	Trinomial
L <sub>DR</sub> R	Numerical
L <sub>DJ</sub>	Sturm's function (Sturm's theorem)
L <sub>DK</sub>	Transcendental equations
L <sub>DL</sub>	Separation of the roots
L <sub>DM</sub>	Approximation of the roots
L <sub>DN</sub>	Real and complex roots
L <sub>DO</sub>	Rational functions of the roots
L <sub>DO</sub> S	Symmetric
L <sub>DO</sub> A	Affect
L <sub>DO</sub> F	Formulae and processes
L <sub>DP</sub>	Galois theory
L <sub>DQ</sub>	Finite groups of linear substitutes
L <sub>DR</sub>	Problems

## L<sub>D</sub>S Theory of numbers

*See also L<sub>BU</sub>*

L <sub>DT</sub> T	Elementary theory
L <sub>DTA</sub>	Prime numbers
	<i>See also L<sub>CP</sub></i>
L <sub>DTC</sub>	Perfect numbers
L <sub>DTE</sub>	Amicable numbers
L <sub>DTG</sub>	Magic squares
	<i>See also L<sub>ER</sub></i>
L <sub>DTI</sub>	Congruence and residue
L <sub>DTK</sub>	Quadratic binary forms. Equivalence
L <sub>DTM</sub>	Binomial congruence
L <sub>DTO</sub>	Exponential congruence

L <sub>DTR</sub>	Diophantine equation
L <sub>DTU</sub>	Partial fractions
L <sub>DTY</sub>	Quadratic residue. Law of reciprocity
	Theory of forms <i>See</i> L <sub>DC</sub>
L <sub>DV</sub>	Analytical theory of numbers
L <sub>DVE</sub>	Reduction
L <sub>DVI</sub>	Gauss's sums
L <sub>DVO</sub>	Arithmetical functions
L <sub>DW</sub>	Algebraic and transcendental numbers
L <sub>DWA</sub>	Rational domain
L <sub>DWE</sub>	Galois field
L <sub>DWI</sub>	Ideal numbers
L <sub>DWU</sub>	Transcendental numbers
L <sub>DWY</sub>	Value of $\pi$
L <sub>DX</sub>	Cyclotomy <i>See also</i> L <sub>GCY</sub>
L <sub>DY</sub>	Complex multiplication
L <sub>DZ</sub>	Problems

## L<sub>E</sub> Calculus of probability, and allied problems

L <sub>EA</sub>	Antecedent probability (A priori probability)
L <sub>EAB</sub>	Tables of values
L <sub>EAD</sub>	Direct determination
L <sub>EAF</sub>	Indirect determination
L <sub>EAI</sub>	Total probability
L <sub>EAM</sub>	Composite probability
L <sub>EAL</sub>	De Moivre's problem
L <sub>EAN</sub>	Problem of duration of play. Games of chance
L <sub>EAP</sub>	Geometrical probability (Local probability) <i>See also</i> L <sub>OY</sub>
L <sub>EAR</sub>	Buffon's needle problem
L <sub>EAT</sub>	Problem of points (Four point problem)
L <sub>EAV</sub>	Mean value and theory of errors
L <sub>EB</sub>	Probability from repeated observations
L <sub>EBC</sub>	Bernoulli's theorem
L <sub>EBI</sub>	Poisson's law (Law of large numbers)

LEC	A posteriori probability
LECE	Baye's theorem
LED	Accidental occurrences determining loss and gain
LEDE	Mathematical expectation
LEDI	Mathematical risk
LEDO	Moral expectation
LEE	Calculus of adjustment (Method of least squares; Theory of errors)
LEEB	Law of facility of errors
LEED	Law of frequency of errors
LEEF	Theorem of arithmetical mean
LEEJ	Gauss' foundation
LEEK	Laplace's foundation
LEEL	Other methods
LEEN	Law of errors of observation
LEEP	Mean, average and probable errors
LEER	Adjustment of conditional observations
LEES	Errors in the plane and in space
LEET	Errors in adjustment
LEEV	Systematic concealment of errors
LEEX	Interpolation
LEEY	Interpolation formulae
EEEZ	Construction of mathematical tables
LEF	Application of the Calculus of adjustment to statistics (Mathematical statistics)
LEFA	Laplace's method
LEFD	Lexis' dispersion theory
LEFE	Serially varying probability
LEFI	Theoretical probability, Statistical mean value
LEFL	Formal theory of population
LEFO	Mortality probabilities and coefficients
LEFU	Mortality tables. Life tables
LEFY	Individuality tables
LEG	Life insurance
LEGA	Statistical tables
LEGH	Life tables. Valuation tables
LEGG	Vital statistics
LEGD	Numerical tables

LEGE	Accident and sickness insurance
LEGF	Normal risk
LEGG	Extra risk
LEGH	Net capital
LEGI	Premiums
LEGJ	Premium reserve
LEGK	Life annuities
LEGL	Joint-life annuities
LEGM	Gross capital
LEGN	Extra payment and expense
LEGO	Redemption values
LEGP	Balance
LEGQ	Profit
LEGR	Dividends
LEGS	Tontine system
LEGT	Theory of risks
LEGU	Mean risk
LEGV	Average risk
LEGY	Stability

Calculus of finite differences See LFG

## LEI Numerical computation

### LEJ Exact computation

LEJA	Without special apparatus
LEJB	Systematic multiplication and division
LEJC	Complementary multiplication and division
LEJD	Numerical tables <i>See also LBI</i>
LEJE	Calculating apparatus and machines
LEJF	Apparatus
LEJG	Abacus
LEJH	Addition and subtraction
LEJI	Multiplication and division
LEJJ	Arithmograph
LEJK	Calculating machines
LEJL	Ordinary calculation
LEJM	Numbering mechanism
LEJN	Comptometers. Adders
LEJO	Interpolation mechanism
LEJP	Extended addition machine
TEJQ	Exact multiplication
LEJR	Subtraction and division; Quotient apparatus
LEJS	Special appliances
LEJT	Compound calculation (Automatic machines)
LEJU	Difference engine (Calculating engine)
LEJV	Analytical engine

## LEK Approximate computation

LEKA	Without special apparatus
LEKB	Abridged multiplication
LEKC	Abridged root extraction
LEKD	Numerical tables . <i>See also LBI</i>
LEKE	Graphic calculation
LEKF	Fundamental scale uniformly divided
LEKG	Fundamental scale logarithmically divided
LEKH	Graphic tables. Nomography
LEKI	Functions of one variable
LEKJ	Cartesian tables
LEKK	Hexagonal tables
LEKL	Method of aligned points
LEKM	Continuous calculating apparatus
LEKN	Logarithmic slide-rule
LEKO	Curved slide-rule (Spiral slide-rule)
LEKP	Ordinary arithmetical operations
LEKQ	Equations with one variable
LEKR	Solution of equation systems
LEKS	Physical methods
LEKT	Hydrostatic solution of equations
LEKU	Electric solution of equations
LEKV	Proofs

## LEL Mathematical recreation (Games)

LEM	Arithmetical problems
LEME	Problems in numbering
LEMG	Josephus game
LEMO	Bachets weights
LEMU	Fermats theorem
LEN	Geometrical problems
LEND	Coloring maps

LENE	Tessellation
LENO	Problems with counters. Tait's problem
LENU	Transportation problems
LENY	Geometrical puzzles (Rods, Rings, etc.)
LEO	Miscellaneous puzzles
LEOA	The 15-puzzle (Boss puzzle)
LEOE	Tower of Hanoi
LEOI	Chinese rings
LEOO	Eight queens problem
LEOU	Fifteen school girl problem (Kirkman's problem)
LEP	Universal problems
LEPA	Bridge problem
LEPE	Labyrinths and mazes
LEPI	Geometrical trees <i>See also L<sub>GAL</sub></i>
LEPO	Hamiltonian game (Dodecahedron game)
LEPU	Knight's path problem
LER	Magic squares <i>See also L<sub>DTG</sub></i>
LES	Euler's square
LET	Problems with chess-board and draught board
LEU	Domino games
LEV	Solitaire problems (This is not the Solitaire commonly called "Patience" for which see L <sub>EX</sub> )
LEX	Problems with cards
LEY	Paper folding <i>See also L<sub>GFY</sub></i>

# LEYZ Higher mathematics

Better with general works LB

## L<sub>F</sub> Analysis

(Real quantities)

LFA	Infinitesimal analysis (Infinitesimal calculus)
LFAL	Theory of limits
LFAN	Theory of functions
LFAR	One variable
LFAS	Several variables
LFB	Differential and integral calculus
LFC	Differential calculus
LFCA	Function of one variable
LFCC	Function of several variables
LFCE	The infinite
LFCG	Derivation
LFCT	Differentials. Differentiation
LFCK	Maxima and minima
LFCL	Indefinite forms
LFCO	Development in series
LFCS	Mean value-theorem
LFCT	Expansions
LFCU	Taylor-Maclurin's theorem
LFCY	Rolle's theorem
LFD	Integral calculus
LFDA	Function of one variable
LFDB	Function of several variables
LFDD	Definite integral
LFDE	Gamma function
LFDG	Beta function
LFDI	Bernoullian numbers
LFDK	Gauss' sums
LFDL	Improper integral
LFDN	Elliptical integral
LFDO	Multiplic integral
LFDS	Linear differential forms
LFDT	Apparatus and methods
LFDU	Planimeter. Integrator
LFDV	Integraph
LFDY	Harmonic analysers
LFE	Differential equations
LFEA	Ordinary differential equations
LFEC	Singular integral
LFEE	Ordinary linear differential equations
LFEG	Equations of the n-th order

L <sub>FEI</sub>	Integration by means of series
L <sub>FEK</sub>	Simultaneous differential equations
L <sub>FEL</sub>	Calculus of operations
L <sub>FEQ</sub>	Partial differential equations
L <sub>FEP</sub>	Arbitrary functions
L <sub>FES</sub>	Total differential equations
L <sub>FET</sub>	Pfaff's problem. System of Pfaffians
L <sub>FNU</sub>	Non-linear differential equations
L <sub>FHY</sub>	Higher differential problems
L <sub>FF</sub>	Continuous transformation groups
L <sub>FFE</sub>	Point transformation
L <sub>FFI</sub>	Contact transformation
L <sub>FFO</sub>	Differential invariants
L <sub>FFU</sub>	Application to differential equations
L <sub>FG</sub>	Calculus of finite differences
L <sub>FGA</sub>	Interpolation. Interpolation functions
L <sub>FGC</sub>	Newton's interpolation formula
L <sub>FGE</sub>	J. Bernoulli's function
L <sub>FGI</sub>	Approximation formula
L <sub>FGO</sub>	Euler's summation formula
L <sub>FGU</sub>	Inverse difference calculus
L <sub>FGY</sub>	Equation of differences Determinants <i>See</i> L <sub>DD</sub>
L <sub>FH</sub>	Boundary value problems
L <sub>FI</sub>	Ordinary differential equations
L <sub>FJ</sub>	Partial differential equations
L <sub>FK</sub>	Theory of potentials
L <sub>FL</sub>	Calculus of variations
L <sub>FLA</sub>	Theory of maxima and minima
L <sub>FLC</sub>	Variations of a single integral
L <sub>FLE</sub>	First variation
L <sub>FLG</sub>	Lagrange's multiplicator method
L <sub>FLI</sub>	Isoperimetric problems
L <sub>FLL</sub>	Second variation
L <sub>FLN</sub>	Weierstrasse's theory

L,FLO	Variation of multiple integrals
L,FLR	Various problems
L,FLRA	Newton's
L,FLRB	Brachistochrone
L,FLS	Application to geometry and mechanics
L,FLT	Trigonometrical interpolation (Mathematical treatment of periodic natural phenomena)
L,FLU	With one known period
L,FLV	With several known periods
L,FLW	With concealed periodicity
L,FLX	Tables, etc.

### Complex quantities

L,FM	Analytic functions
L,FN	Functions of complex variables
LFNA	Differentiation and integration
LFNE	Weierstrass's function
LFNT	Transcendent functions
LFNO	Continuity
LFNU	Holomorphic and meromorphic functions
LFNY	Essential singular point
L,FO	Geometric theory of functions
L,FP	Analytic functions and infinite series
LFPA	Series of Wronski and Lagrange
LFPE	Development of Fourier's series
LFPI	Development by Legendre's function
LFPO	Development by Laplace's function
LFPU	Development by Bessel's function
L,FQ	Functions of several complex quantities
L,FR	Algebraic functions and their integrals
L,FRA	Algebraic configuration
L,FRE	Riemann's surfaces
	<i>See also</i> LGAJ, LGAK
L,FRI	Abelian integrals. Hyperelliptic integral
L,FRO	Abelian theorem
L,FRU	Special representatives and functions
L,FS	Special functions
LFSA	Exponential
LFSD	Logarithmic
LFSE	Circular and hyperbolic

<b>L<sub>FSI</sub></b>	Gonometric and cyclometric <i>See also LGDA</i>
<b>L<sub>FSL</sub></b>	Bernoullian
<b>L<sub>FSM</sub></b>	Eulerian constant. Harmonic constant
<b>L<sub>FSN</sub></b>	Beta and Gamma functions
<b>L<sub>FSO</sub></b>	Hypergeometric functions
<b>L<sub>FSF</sub></b>	Pi function
<b>L<sub>FSR</sub></b>	Spherical functions (Spherical harmonic, Laplace's function)
<b>L<sub>FSRG</sub></b>	General representation
<b>L<sub>FSSS</sub></b>	Functions of the second species
<b>L<sub>FSST</sub></b>	Theory of poles
<b>L<sub>FSTZ</sub></b>	Zonal harmonics
<b>L<sub>FSU</sub></b>	Expansion
<b>L<sub>FSV</sub></b>	Associated functions
<b>L<sub>FSW</sub></b>	Harmonic analysis
<b>L<sub>FSX</sub></b>	Bessel's (cylindrical) functions
<b>L<sub>FSY</sub></b>	Lamé's functions (Ellipsoidal harmonics)
<b>L<sub>FSYC</sub></b>	Functions of elliptical and parabolic cylinders
<b>L<sub>FSVG</sub></b>	Toroidal functions
	Other spherical functions
<b>L<sub>FIT</sub></b>	Inverse functions
<b>L<sub>FU</sub></b>	• Elliptic functions and integrals
<b>L<sub>FEUD</sub></b>	Jacobi's
<b>L<sub>FUL</sub></b>	Jacobi's Theta
<b>L<sub>FUN</sub></b>	Weierstrass's
<b>L<sub>FUR</sub></b>	Modular
<b>L<sub>FUS</sub></b>	Transformation of functions
<b>L<sub>FUY</sub></b>	Multiplication of the arguments
<b>L<sub>FV</sub></b>	Hyperelliptic (Ultraelliptic) and Abelian functions
<b>L<sub>FVE</sub></b>	Jacobi's inversion theory
<b>L<sub>FVI</sub></b>	Ultraelliptic transcendental function
<b>L<sub>FVO</sub></b>	Abel's theta function
<b>L<sub>FVU</sub></b>	Klein's sigma function
<b>L<sub>FX</sub></b>	Automorphic functions
<b>L<sub>FXE</sub></b>	Fuchsian. Thetaschwarzian
<b>L<sub>FXI</sub></b>	Kleinian
<b>L<sub>FY</sub></b>	Functions in union with groups
<b>L<sub>FYD</sub></b>	Linear substitution groups
<b>L<sub>FYL</sub></b>	Polyhedral groups and functions
<b>L<sub>FYN</sub></b>	Periodic and doubly periodic functions
<b>L<sub>FYR</sub></b>	Arithmetical theory of algebraic functions
<b>L<sub>FZ</sub></b>	Problems

# **L<sub>G</sub> Geometry**

## **L<sub>G</sub> Foundation and principles**

**L<sub>GA</sub>** Euclidean and non-Euclidean (General discussion.)

For special treatment see Plane geometey **L<sub>G</sub>B<sub>J</sub>** and Absolute geometry **L<sub>GY</sub>**

**L<sub>GAA</sub>** Theory of parallels

## **L<sub>GAB</sub> Hypothesis of continuity**

## **L<sub>GAC</sub> Space. Space division**

**L<sub>GAD</sub>** Hyperspace

*See also L<sub>GUI</sub> and L<sub>GY</sub>*

**L<sub>GAE</sub>** Curved (non-homaloidal) space

**L<sub>GAF</sub>** Elliptic

**L<sub>GAG</sub>** Hyperbolic

## **L<sub>GAH</sub> Topology (Analysis situs) Polyhedra**

**L<sub>GAI</sub>** Connection of surfaces

**L<sub>GAJ</sub>** Riemann's surfaces

*See also L<sub>FRE</sub>*

**L<sub>GAK</sub>** Riemann's surfaces projectively considered

**L<sub>GAL</sub>** Trees (knots)

*See also L<sub>EPI</sub>*

**L<sub>GAM</sub>** Connection of spaces

**L<sub>GAN</sub>** Betti's numbers

**L<sub>GAO</sub>** Topology of 3-dimensional space

**L<sub>GAP</sub>** Polyhedra. Polyhedra theory

*See also L<sub>GCC</sub>*

**L<sub>GAQ</sub>** Polygons

**L<sub>EAR</sub>** General theory

**L<sub>GAS</sub>** Special forms

**L<sub>GAS</sub>I** Inscriptible

<b>LGAT</b>	Polyhedra
<b>LGAU</b>	General theory
<b>LGAV</b>	Eulerian (simple polyhedra)
<b>LGAW</b>	Special Eulerian
<b>LGAWE</b>	Regular (Platonic solids)
<b>LGAWI</b>	Semi-regular (Archimedean solids)
<b>LGAWO</b>	Polyhedra nets
<b>LGAX</b>	Special of higher order
<b>LGAXA</b>	Polyhedra of 4-dimensions
<b>LGAXE</b>	Polyhedra of n-dimensions
<b>LGAXI</b>	Stellate
<b>LGAXL</b>	Poinsot's solid
<b>LGAXO</b>	Semi-regular
<b>LGAXU</b>	Symmetrie
<b>LGAXY</b>	Ring
<b>LGAY</b>	Crystallography (May be put in Mineralogy if preferred)

## **LGAZ** Empirical geometry

Arranged by authors under countries, as in history of mathematics, or, better, in one general alphabet of authors

## **LGB** Greek synthetic geometry

Works of individual writers arranged alphabetically under the schools ; or in one general alphabet

<b>LGBA</b>	Ionic school
<b>LGBAA</b>	Anaxagoras
<b>LGBAT</b>	Thales
<b>LGBB</b>	School of Pythagoras
<b>LGBBA</b>	Archytas
<b>LGBBO</b>	Philolaus
<b>LGBBP</b>	Pythagoras
<b>LGBC</b>	Sophist school
<b>LGBCA</b>	Antiphon
<b>LGBCB</b>	Bryson of Heraclea
<b>LGBCG</b>	Democritus
<b>LGBCH</b>	Hippias of Elis
<b>LGBCI</b>	Hippocrates
<b>LGBD</b>	Platonic school
<b>LGBDA</b>	Aristæus
<b>LGBDE</b>	Eudoxus

LGBDI	Dinostratus
LGBDM	Menæchmus
LGBDP	Plato
LGBE	First Alexandrian school
LGBEA	Apollonius
LGBEB	Archimedes
LGBED	Eratosthenes
LGBEE	Euclid
LGBEH	Hipparchus
LGBEN	Nicomedes
LGBF	Second Alexandrian school
LGBFL	Claudius Ptolemaeus
LGBFP	Pappus
LGBFQ	Proclus

## LGBG Synthetic geometry of Guldin, Kepler, Roberval, etc.

LGBH	Method of exhaustions <i>See also</i> LCME
LGBI	Method of indivisibles

## LGBJ Elementary geometry (Euclidean geo- metry)

LGBK	Plane (Planimetry)
LGBL	Right line
LGBM	Plane
LGBN	Angle
LGBO	Triangle
LGBP	Quadrilateral. Tetragon
LGBQ	Parallelogram
LGBR	Deltoid
LGBS	Polygon <i>See also</i> LGAQ
LGBT	Circle <i>See also</i> LGF

LGC	Solid (Stereometry)
LGCA	Trihedron*
LGB	Tetrahedron
LGC	Polyhedron <i>See also LGAP</i>
LGCD	Prism
LGCE	Parallellopiped
LGCF	Prismoid. Obelisk
LGCG	Prismatoid
LGCH	Pyramid
LGCI	Cylinder
LGCI	Cone
LGCK	Sphere
LGCL	Symmetry and similarity
LGCM	Porisms
LGCN	Golden section (Median section)
LGCO	Theory of transversals
LGCP	Loci
LGCO	Mensuration
LGCR	Insoluble problems
LGCS	Trisection of the angle
LGCT	Duplication of the cube
LGCU	Delian problem
LGCV	Quadrature of the circle (Circle squaring, Cyclotomy) <i>See also LDX</i>
LG CZ	Problems

## LGD Trigonometry

LGDA	Trigonometric functions. Goniometry
LGDB	Deformation of trigonometric expressions
LGDC	Auxiliary angles
LGDD	De Moivres theorem
LGDE	Series
LGDF	Logarithms
LGDG	Logarithmic tables <i>See also LBL</i>

L <sub>GDH</sub>	Formulae
L <sub>GDI</sub>	Transformation
L <sub>GDJ</sub>	Plane trigonometry
L <sub>GDK</sub>	Right-angled triangle
L <sub>GDL</sub>	Oblique-angled triangle
L <sub>GDM</sub>	Trigonometrical developments
L <sub>GDN</sub>	Spherical trigonometry (Spherics)
L <sub>GDO</sub>	Right-angled triangle
L <sub>GDPN</sub>	Napier's rules
L <sub>GDP</sub>	Oblique-angled triangle
L <sub>GDPF</sub>	Quadrantal angle
L <sub>GDPF</sub>	Reid's method
L <sub>GDO</sub>	Spherical excess
L <sub>GDOE</sub>	Girard's theorem
L <sub>GDOI</sub>	Cagnoli's theorem
L <sub>GDOO</sub>	L'Huilier's theorem (Lhuilierian)
L <sub>GDR</sub>	Inscribed and circumscribed circles
	<i>See also</i> L <sub>GEU</sub>
L <sub>GDS</sub>	Circles on the sphere
	<i>See also</i> L <sub>GFB</sub>
L <sub>GDT</sub>	Analytical trigonometry
L <sub>GDU</sub>	Radian measure
L <sub>GDV</sub>	Spheroidal trigonometry
L <sub>GDW</sub>	Loxodromic trigonometry
L <sub>GDX</sub>	Pseudospherical trigonometry
	<i>See also</i> L <sub>GWL</sub>
L <sub>GDY</sub>	Hyperbolic trigonometry
	<i>See also</i> L <sub>GYC</sub>
L <sub>GDZ</sub>	Problems
L <sub>GE</sub>	Modern synthetic geometry
L <sub>GEA</sub>	Plane (General works)
L <sub>GEB</sub>	Solid (General works)
L <sub>GEC</sub>	Theory of the mean center
L <sub>GED</sub>	Weill's theorem
L <sub>GEE</sub>	Reciprocal theorems

LGEF	Maximum and minimum
LGEG	Method of infinitesimals
LGEH	Point O theorem
LGEI	Inversion
LGEJ	Involution
LGEK	Geometry of the triangle
LGEL	Rectilinear figures
LGEM	Collinear points and concurrent lines
LGEM	Pascal's hexagram
LGEO	Brianchon's hexagram
LGEP	Harmonic section and ratio
LGEQ	Theory of similar figures
LGER	Properties of two triangles
LGES	Gaskin's theorem
LGET	Hesse's theorem
LGEU	Circumscribed, inscribed and escribed circles

*See also LGDR*

LGEV	Synmedians
LGEW	Grebe point
LGEX	Brocardian figure
LGEXA	Brocard point and angle
LGEXE	Brocard circle (Seven point circle)
LGEXI	Equibrocardian triangle
LGEXO	Neuberg circle
LGEXU	McCay circle
LGEXY	Lemoine circle
LGEZ	Tucker's circles
LGEXA	Cosine circle
LGEXE	Tripligate ratio circle ("T. R." circle)
LGEXI	Taylor's circle
LGEXO	Malfatti's problem
LGEXU	Concentric circles
LGEXY	Nine points circle. Feuerbach's theorem
LGEXZ	Cosymmedian triangles

### LGF      Geometry of the circle

LGFA	Pole and Polar
LGFB	Salmon's theorem
LGFC	Reciprocation
LGFD	Inscribed and circumscribed tetrastigm and tetragram
LGFE	Properties of two circles
LGFF	Circles of similitude and antisimilitude
LGFG	Coaxal circles

LGFH Systemus of circles

LGFI Three circles

LGFI Apollonian problem

LGFK Four circles

LGFL Circular triangle

LGFM Problems

## LGFN Practical geometry (Constructive geometry; Geometrography)

LGFO Drawing instruments and apparatus

LGFP Instrumental drawing

LGFQ Mechanical

LGFR Machine

LGFS Architectural

LGFT Ship draughting

LGFU Topographical

LGFW Stereotomy (Stone cutting)

LGFW Crystallographic

LGFX Models

LGFY Paper folding

*See also LEY*

LGFP Problems

} See the various  
subjects

## LGFZ Geometry of position (Carnot)

## LGG Geometry of transformation (Descriptive and projective geometry)

LGGA Projection. Projectivity

LGGB Central

LGGC Clinographic (oblique)

LGGD Two projections

LGDE Monge's orthographic

LGDI Orthogonal. Photogrammetry

*See also LGHA*

LGDO Axonometry

LGGE Transformation of projections

LGGF Orthogonal

LGGS Oblique

LGGH	Special methods
LGGI	Parallelogram
LGGR	Relief
LGK	Stereoscopic
LGGL	Central with prime plane
LGGM	Figures with finite number of planes
LGGN	Trihedra
LGGO	Polyhedra
LGGP	Section of polyhedra
LGGQ	Theory of curves and surfaces
LGGR	Doctrine of curves
LGGS	Characteristics of algebraic curves
LGGR	Special curves
LGGU	Surfaces of the 2nd degree
LGGV	Warped
LGGA	Skew hyperboloid
LGGE	Orthogonal hyperboloid
LGVI	Equilateral hyperboloid
LGVO	Hyperbolic paraboloid
LGVU	Equilateral hyperbolic paraboloid
LGVV	Skew rotation hyperboloid
LGW	Non-regular
LGWE	Spherical
LGWI	Spherical pencils
LGWO	Dupin's cyclid
LGX	Rotation
LGXE	Spheroid
LGXI	Paraboloid
LGXO	Hyperboloid
LGY	Triaxal
LGZ	Warped of higher orders
LGZA	Ruled of 3rd degree
LGZE	Conoid
LGZG	Normal
LGZI	Vaulted
LGZL	Conies-conoid
LGZN	Spheric-conoid
LGZO	Cylindroid
LGZT	Revolution
LGZU	Envelope
LGZY	Helix and helicoid
LGH	Descriptive geometry
LGHA	Orthogonal projection
	<i>See also LGHD</i>
LGHB	Isometric

L <sub>G</sub> HIC	Spherical projection. Map projection Methods (Arrange alphabetically)
L <sub>G</sub> HED	Conical
L <sub>G</sub> HED	Discontinuous
L <sub>G</sub> HCE	Equivalent
L <sub>G</sub> HCM	Meridional
L <sub>G</sub> HCO	Orthomorphic
L <sub>G</sub> HCP	Parallelogrammatic
L <sub>G</sub> HCP	Perspective
L <sub>G</sub> HCR	Zenithal
	(Special forms) (Arrange alphabetically)
L <sub>G</sub> HDA	Arago's
L <sub>G</sub> HDC	Cassini's
L <sub>G</sub> HDG	Globular
L <sub>G</sub> HDL	Lagrange's
L <sub>G</sub> HDM	Mercator's
L <sub>G</sub> HDP	Polyconic
L <sub>G</sub> HDS	Stereographic
L <sub>G</sub> HE	Linear perspective
L <sub>G</sub> HF	Shades and shadows
L <sub>G</sub> HG	Point of illumination
L <sub>G</sub> HH	Problems
L <sub>G</sub> HI	Projective geometry
L <sub>G</sub> HJ	Primitive figure
L <sub>G</sub> HK	Infinitely distant element. Correlation
L <sub>G</sub> HL	Homology
L <sub>G</sub> HM	Homothetic figures
L <sub>G</sub> HN	Homological figures in space
L <sub>G</sub> HO	Affinity
L <sub>G</sub> HP	Correspondence
L <sub>G</sub> HQ	Chasles' principle and theorem
L <sub>G</sub> HR	Collineation
L <sub>G</sub> HS	Duality. Reciprocity
L <sub>G</sub> HT	Polar reciprocity
L <sub>G</sub> HU	Projective forms and relations
L <sub>G</sub> HV	Metrical relation
L <sub>G</sub> HW	Harmonic forms
L <sub>G</sub> HX	Anharmonic ratio (Cross ratio)
L <sub>G</sub> HY	Metric projective relation
L <sub>G</sub> HZ	Theorem of Pappus
L <sub>G</sub> I	Involution
L <sub>G</sub> IA	Metrical relation
L <sub>G</sub> IB	Double element
L <sub>G</sub> IC	Elliptic involution
L <sub>G</sub> ID	Hyperbolic involution
L <sub>G</sub> IE	Theorems of Ceva, Carnot and Menelaus

LGIF	Conic sections treated projectively
LGIG	Curves, sheaves and cones of the 2nd order
LGIM	Theorems of Pascal and Brianchon
LGIT	Möbius' theorem
LGIL	Maclaurin's theorem
LGIK	Theorem of Apollonius
LGIL	Concurrence
LGIM	Desargues' theorem
LGIN	Self-corresponding element. Double element
LGIO	Problems of the second degree
LGIP	Pole and polar on the conic
LGIQ	Diameter and middle point
LGIR	Reguli. Ruled surfaces <i>See also LGOP, LGUU</i>
LGIS	Quadric surfaces. Ruled quadric surfaces
LGIT	Twisted cubic
LGIU	Foci
LGIV	Axes and planes of symmetry
LGIW	Nets and webs of conics
LGIX	Problems

## LGIY Application of algebra and analysis to geometry

LGIZ	Multiple algebra
LGIZB	Double algebra
LGIZC	Barycentric calculus (Möbius 1827)
LGIZD	Method of equipollences (Bellavitis 1837)
LGJ	Vector analysis (Quadrature algebra)  Vectors Quaternions <i>See also LGJO</i>
LGJE	Biquaternions
LGJF	Pluquaternions. Homoid product
LGJG	Quinions
LGJI	Nonians
LGJI	Directional calculus (Theory of extension; Space analysis; Extensive algebra; Ausdehnungslehre)
LGJJ	Theory of matrices
LGJK	Application to analytical geometry
LGJL	Application to physics
	Differential geometry (See LGV)

<b>LGJM</b>	Coordinate systems <i>See also LGKC</i>
<b>LGJN</b>	Parallel coordination
<b>LGJNE</b>	Point and plane coordinates
<b>LGJNT</b>	Translation of the system
<b>LGJNO</b>	Rotation of the system
<b>LGJO</b>	Tetrahedral and triangular coordinates
<b>LGJP</b>	Plücker's coordinates
<b>LGJQ</b>	Barycentric coordinates
<b>LGJR</b>	Spherical triangle coordinates
<b>LGJS</b>	Relation coordinates
<b>LGJT</b>	Polar and bi-polar coordinates
<b>LGJU</b>	Elliptic coordinates
<b>LGJV</b>	Hyperbolic coordinates
<b>LGJW</b>	Parabolic coordinates
<b>LGJX</b>	Circle and lemniscate coordinates
<b>LGJY</b>	Elementary geometry treated algebraically
<b>LGJZ</b>	Graphic methods
<b>LGJZP</b>	Problems
<b>LGK</b>	Algebraic geometry (Analytical geometry; Coordinate geometry)
<b>LGKA</b>	Analytical geometry of the plane (General works)
<b>LGKB</b>	Analytical geometry of space (General works)
<b>LGKC</b>	Coordinates <i>See also LGJM</i>
<b>LGKCA</b>	Transformation of coordinates
<b>LGKD</b>	Loci
<b>LGKE</b>	Equation of the 1st degree (the right line)
<b>LGKEL</b>	Rectilinear system
<b>LGKEN</b>	Polar system
<b>LGKF</b>	General theory of curves
<b>LGKG</b>	Curvature
<b>LGKH</b>	Middle point
<b>LGKI</b>	Osculating curves
<b>LGKJ</b>	Systems of curves

L <sub>GKK</sub>	Plane curves
L <sub>GKL</sub>	Curves of the 2nd order (Conics ; Conic sections)
L <sub>GKM</sub>	Ellipse
L <sub>GKN</sub>	Parabola
L <sub>GKO</sub>	Hyperbola
L <sub>GKP</sub>	Diameter and middle point
L <sub>GKQ</sub>	Axis
L <sub>GKR</sub>	Metrical properties
L <sub>GKS</sub>	Projective properties <i>Sce also L<sub>GH</sub>I</i>
L <sub>GKT</sub>	Pascal's hexagram
L <sub>GKU</sub>	Focal properties
L <sub>GKV</sub>	Equations of the conic
L <sub>GKX</sub>	Confocal conics
L <sub>GKY</sub>	Bundle of conics
L <sub>GKZ</sub>	Systems of two conics
L <sub>GL</sub>	Algebraic plane curves
L <sub>GLA</sub>	Singularities
L <sub>GLAA</sub>	Plücker's formula
L <sub>GLB</sub>	Equation of the curve
L <sub>GLC</sub>	Polar curves
L <sub>GLD</sub>	Covariant curves
L <sub>GLE</sub>	Hessian
L <sub>GLF</sub>	Steinerian
L <sub>GLG</sub>	Cayleyan
L <sub>GLH</sub>	Linear system
L <sub>GLI</sub>	Bundles of curves
L <sub>GLJ</sub>	Nets
L <sub>GLK</sub>	Curve of three curves
L <sub>GLL</sub>	Point groups
L <sub>GLM</sub>	Adjoint curves
L <sub>GLN</sub>	Theorem of residues
L <sub>GLP</sub>	Hyperelliptic curves
L <sub>GLQ</sub>	Birational transformation (Cremona transformation)
L <sub>GLR</sub>	Riemann's theorem
L <sub>GLS</sub>	Multiform (polytropic) transformation
L <sub>GLT</sub>	Isogonal correspondence
L <sub>GLU</sub>	Plane connex
L <sub>GM</sub>	Plane curves of 3rd order (Cubic curves)
L <sub>GMA</sub>	Covariant curves
L <sub>GMB</sub>	Steiners polygon
L <sub>GMC</sub>	Projective generation
L <sub>GMD</sub>	Equation

L <sub>GME</sub>	Discriminants
L <sub>GMF</sub>	Special forms
L <sub>GMH</sub>	Plane curves of 4th order (Quartic curves)
L <sub>GMI</sub>	Hesse's generation
L <sub>GMJ</sub>	Equation
L <sub>GMK</sub>	Double tangents
L <sub>GML</sub>	Special forms
L <sub>GMN</sub>	General theory of surfaces
L <sub>GMO</sub>	Surfaces of the 2nd order (Quadric surfaces)
L <sub>GMP</sub>	Ellipsoid
L <sub>GMQ</sub>	Paraboloid
L <sub>GMR</sub>	Hyperboloid
L <sub>GMS</sub>	Projective generation
L <sub>GMT</sub>	Equation
L <sub>GMU</sub>	Metric properties
L <sub>GMV</sub>	Focal properties
L <sub>GMW</sub>	Rotation surfaces
L <sub>GMX</sub>	Cyclic planes. Umbilics
L <sub>GMY</sub>	Sheaves and nets
L <sub>GN</sub>	Algebraic surfaces and algebraic gauche (torsion or twisted) curves
L <sub>GN</sub> A	Developable warped surfaces
L <sub>GN</sub> B	Fundamental relations
L <sub>GN</sub> C	Analytical representation of twisted curves
L <sub>GN</sub> CA	Cayley's monoid surface
L <sub>GN</sub> D	Twisted curves of 3rd order
L <sub>GN</sub> E	Twisted curves of 4th order
L <sub>GN</sub> F	Twisted curves of 5th order
L <sub>GN</sub> G	Singular points (Singularities) and twisted curves
L <sub>GN</sub> G E	Deficiency
L <sub>GN</sub> G I	Cayley's formula
L <sub>GN</sub> G O	Curves on the hyperboloid
L <sub>GN</sub> G U	Contact surfaces
L <sub>GN</sub> H	Polar surfaces. Covariant surfaces
L <sub>GN</sub> H E	Hessian and Steinerian
L <sub>GN</sub> I	Linear surface system
L <sub>GN</sub> I L	Bundles of surfaces and curves

LGNJ	Birational transformation
LGNJE	Homaloid surface
LGNK	Representation of a surface on the plane
LGNL	Gauche (skew) curves of various orders
LGNM	Curves on surfaces 2nd order (Spherical curves)
LGNME	Spherical conics
LGNMO	Conformal representation <i>See also</i> LGVX
LGNN	Curves of the 3rd order (Cubic skew curves)
LGNO	Null-system
LGNP	Cubic ellipse
LGNQ	Cubic hyperbola
LGNR	Cubic parabolic hyperbola
LGNS	Cubic parabola
LGNT	Curves of the 4th order 1st species
LGNU	Spherical conic
LGNV	Curves of the 4th order 2nd species
LGNW	Theory of osculants
LGNX	Curves of the 5th order
LGNY	Curves of the 6th order
LGNZ	Rational skew curves (Unicursal curves)
LG0	Surfaces of the 3rd order (Cubic surfaces)
LGOA	Geometric generation
LGOB	Cayley's surface
LGOC	Sylvester's pentahedra
LGOD	Hessian surface (Fundamental surface)
LGOE	Clebsch diagonal surface
LGOF	Straight lines and surfaces of 3rd order
LGOG	Classification of real surfaces
LGOH	Plane representation (Other cubic surfaces)
LGOI	Surfaces of the 4th order (Quartic surfaces)
LGOJ	Double point surface
LGOJE	Kummer's
LGOJI	Cayley's tetrahedroid
LGOJO	Fresnel's wave
LGOJT	Fresnel's surface of elasticity
LGOK	Surfaces with infinity of conics
LGOL	Surfaces with double conics
LGOM	Surfaces with cuspidoidal conics
LGON	Cyclids
LGONE	Double pointed
LGONT	Dupin's
LGONO	Pedal surfaces

LGOO	Surfaces with double straight lines
LGOOS	Steiner's (Roman surface)
LGOP	Ruled surfaces <i>See also LGIR, LGUV</i>
LGOQ	Skew ruled surfaces
LGOR	Surfaces of higher orders
LGOS	Surfaces of the 5th order
LGOSE	Developable
LGOSI	Non-ruled
LGOSO	Warped-ruled
LGOT	Surfaces of the 6th order
LGOU	Osculating (Tangent)
LGOV	Developable
LGOW	Developable surface of the 7th order
LGOX	Ruled surfaces of any order
LGUY	Line of striction
LGÖZ	Rational surfaces
LGPP	Special curves and surfaces
LGPA	Inversion. Transformation (by reciprocal radii vectors)
LGPB	Curves of the 3rd order
LGPC	Rational
LGPD	Circular. Spire
LGPE	Cissoid of Diocles
LGPF	Strophoid
LGPG	Cartesian parabola
LGPH	Folium Cartesii
LGPI	Versiera. Visiera and Pseudoversiera
LGPJ	Curves of the 4th order
LGPK	Rational
LGPL	Elliptic and bi-circular
LGPM	Cardoid
LGPN	Conehoed of Nicomedes
LGPO	Pedal <i>See also LGSP</i>
LGPP	Cartesian oval
LGPQ	Limaçon of Pascal
LGPR	Carrenian
LGPS	Lemniscate
LGPT	Gérono's lemniscate
LGPU	Spirie line of Perseus
LGPY	Conehoed
LGQ	Special algebraic curves higher than the 4th order
LGQA	Curves derived from conics
LGQC	Astroids
LGQE	Glissettes
LGQG	Watt's curve
LGQT	Curves of the 6th and 8th orders
LGQK	Curves of the 9th and 25th orders

<b>L<sub>G</sub>QL</b>	<b>Special algebraic curves of any order</b>
<b>L<sub>G</sub>QM</b>	Parabola
<b>L<sub>G</sub>QN</b>	Hyperbola
<b>L<sub>G</sub>QO</b>	Lamé's curve (Triangular symmetric)
<b>L<sub>G</sub>QP</b>	Polyzomal
<b>L<sub>G</sub>QQ</b>	Darboux's
<b>L<sub>G</sub>QR</b>	Oval (Triangular curve)
<b>L<sub>G</sub>QS</b>	Multipletrix and Medatrix
<b>L<sub>G</sub>QT</b>	Latrix
<b>L<sub>G</sub>QU</b>	Polynomic
<b>L<sub>G</sub>QV</b>	Sinus spiral <i>See L<sub>G</sub>R1</i>
<b>L<sub>G</sub>QW</b>	Lissajous'
<b>L<sub>G</sub>R</b>	<b>Transcendental curves</b>
<b>L<sub>G</sub>RA</b>	Quadratrix
<b>L<sub>G</sub>RB</b>	Spirals
<b>L<sub>G</sub>RC</b>	Archimedean (Conon's spiral)
<b>L<sub>G</sub>RD</b>	Spirals of higher degree
<b>L<sub>G</sub>RDE</b>	Hyperbolic
<b>L<sub>G</sub>RDI</b>	Cote's lituus
<b>L<sub>G</sub>RE</b>	Logarithmic
<b>L<sub>G</sub>RF</b>	Clothoid (Barycentric curve)
<b>L<sub>G</sub>RG</b>	Cycloid. Hypocycloid
<b>L<sub>G</sub>RH</b>	Roulette
<b>L<sub>G</sub>RJ</b>	Sinns spiral
<b>L<sub>G</sub>RK</b>	Ribaucour's
<b>L<sub>G</sub>RL</b>	Norwich spiral. Euler's curve
<b>L<sub>G</sub>RLS</b>	Trigonometric. Hypertrigonometric
<b>L<sub>G</sub>RM</b>	Sinusoid
<b>L<sub>G</sub>RN</b>	Logarithmic. Hypergeometric
<b>L<sub>G</sub>RE</b>	Extraordinary curves
<b>L<sub>G</sub>RENE</b>	Weierstrass'
<b>L<sub>G</sub>RNT</b>	Boltzmann's H curve
<b>L<sub>G</sub>RNW</b>	W-curve
<b>L<sub>G</sub>RO</b>	Mercator's line. Sumner's line
<b>L<sub>G</sub>RP</b>	Traetrix
<b>L<sub>G</sub>RQ</b>	Catenary
<b>L<sub>G</sub>RR</b>	Plane elastic
<b>L<sub>G</sub>RS</b>	Poincaré's spiral
<b>L<sub>G</sub>RT</b>	Curves of double curvature. (Twisted curves)
<b>L<sub>G</sub>RU</b>	Helix. Cylinder helix
<b>L<sub>G</sub>RV</b>	Loxodrome
<b>L<sub>G</sub>GW</b>	Bertrand's curve <i>See L<sub>G</sub>VNB</i>
<b>L<sub>G</sub>RWE</b>	Spherical cyclic curves
<b>L<sub>G</sub>RWT</b>	Viriani's
<b>L<sub>G</sub>RX</b>	Spherical cyclic lines
<b>L<sub>G</sub>RY</b>	Otherphysical-mathematical curves
<b>L<sub>G</sub>RZ</b>	Weyr's electromagnetic
<b>L<sub>G</sub>GS</b>	Magnetic
<b>L<sub>G</sub>SA</b>	<b>Derived curves</b>
<b>L<sub>G</sub>SB</b>	Curve of pursuit
<b>L<sub>G</sub>SC</b>	Parallel. Equidistant
<b>L<sub>G</sub>SD</b>	Radial
<b>L<sub>G</sub>SE</b>	Toroidal
<b>L<sub>G</sub>SF</b>	Focal lines; Caustic curves
	Pedal. Anti-pedal
	<i>See also L<sub>G</sub>PO</i>

Lgsg	Differential and integral
Lgsn	Derived curves of a curve group
Lgst	Hyper-arithmetic
Lgsj	Hyper-harmonic
Lesk	Mean fibre
LgsL	Resultant
Lgsm	Sector
LgsN	Special surfaces
Lgso	Helicoid
Lgsp	Caustic
Lgsq	Parallel Coneoid
Lgsr	Rotation
Lgss	Cylindrical (Cylinderoid)
LgsT	Spherical (Spheroid)
Lgsr	Conoidal (Conoid)

## LGSZ Problems

# LGT Geometry of the line and sphere in space

LGTA	Line coordinates
LGTB	Klein's coordinates
LGTC	Complex and congruence of lines
LGTD	Complex of the n-th degree
LGTE	Clebsch's theorem
LGTF	Symbolic representation
LGTG	Invariant forms
LGTH	Linear complexes
LGTI	Null-system
LGTJ	Sheaves and nets
LGTK	Klein's linear involution complex
LGTL	Complexes of the 2nd degree
LGTM	Coufocal complexes
LGTN	Classification. Special cases
LGTO	Battaglini's complex (Harmonic complex)
LGTP	Reye's complex (Tetrahedral complex)
LGTR	Linear congruences <i>See also LGWV</i>
LGTS	Null-system of higher order,
LGTT	Focal planes
LGTU	Congruences of 1st order
LGTv	Congruences of 2nd order
LGTy	Spherical geometry (Spherics)
LGTz	Problems

## LGU Enumerative geometry (Denumerative geometry)

LGUA	Product of conditions
LGUB	Symbolic calculus of conditions
LGUC	Incidence formulae
LGUD	Coincidence formulae
LGUE	Chasles's correspondence formulae
LGUF	Method of characteristics
LGUG	Halphen's theorem
LGUH	Evaluation of characteristic numbers of a system

## LGUJ Geometry of n-dimensional space (Hyperspace)

*See also LGAD, LGX*

LGUJ	Homography of hyperspace
LGUK	Collineation. Correlation
LGUL	Reciprocity
LGUM	Parallel-linear manifoldness
LGUN	Non-linear manifoldness. Hyper-surface
LGUO	Monoidal representation
LGUP	Hyperquadratic figure
LGUQ	Hypercubic figure
LGUR	Surfaces of hyperspace
LGUS	Manifoldness of two dimensions
LGUU	Ruled surfaces
	<i>See also LGIR, LGOP</i>
LGUV	Veronese's surface
LGUX	Curves of hyperspace
LGUY	Clifford's theorem

# LGV Differential geometry

*See also LGXH*

LGVA	Geometrical theory of differential equations
LGVB	Infinitesimal theory of curves and surfaces
LGVC	Tangents and normals; Asymptotes
LGVD	Tangential planes
LGVE	Concavity and convexity of plane curves; Inflection
LGVF	Curve arcs
LGVI	Quadrature
LGVI	Complanation
LGVI	Cubature
LGVK	Contents in non-Euclidean geometry
LGVL	Curvature of plane and skew curves
LGVM	Torsion
LGVN	Natural equation
LGVN	Bertrand's curve
LGVO	Contact
LGVP	Osculation. Osculating circle
LGVQ	Envelopes
LGVR	Polar and rectifiable developable
LGVS	Trajectories
LGVT	Filar evolutes and involutes
LGVU	Curvilinear coordinates
LGVE	Parameter lines. Differential parameter
LGVI	Isothermal system. Isothermal lines
LGVV	Conformal representation
LGVV	Geodetic representation
LGVX	Projective representation
LGYY	Spherical representation (Gauss) (Other representations)
LGW	Lines of curvature. Curves on surfaces
LGWA	Moulding surface (Monge)
LGWB	Radius of curvature
LGWC	Asymptotic lines (Inflection curves. Chief tangent curves)
LGWD	Geodetic curvature
LGWE	Geodetic lines (Geodesic lines)
LGWF	Geodetic torsion
LGWG	Geodetic line of ellipsoids
LGWH	Theorems
LGWI	Surfaces of curvature
LGWIA	Representation and development
LGWI	Isometry of surfaces

<b>LGWT</b>	Isometric subgroups
<b>LGWIL</b>	Developable
<b>LGWK</b>	'Surfaces with constant total curvature
<b>LGWL</b>	Pseudospherical <i>See also LGDX</i>
<b>LGWM</b>	Pseudospherical rotation
<b>LGWN</b>	Surfaces with constant mean curvature
<b>LGWNE</b>	Unduloid, Nodoid
<b>LGWNF</b>	Minimal (Elipsoid)
<b>LGWNT</b>	Translation (Sherk's translation surface)
<b>LGWO</b>	Complete isometric groups
<b>LGWP</b>	Infinitesimal isometry
<b>LGWQ</b>	Geometrical models, etc.
<b>LGWR</b>	Surfaces of evolution
<b>LGWS</b>	Goursat's
<b>LGWSW</b>	Weingarten's
<b>LGWT</b>	Tubular
<b>LGWU</b>	Three-fold orthogonal surface system
<b>LGVV</b>	Line congruence <i>See also LGTR</i>
<b>LGVVA</b>	Mass density of the congruence
<b>LGVVC</b>	Congruence of rays
<b>LGVVN</b>	Normal congruence
<b>LGWW</b>	Approximate integration of differential equations
<b>LGWZ</b>	Contact transformation
<b>LGX</b>	Infinitesimal geometry in space of n-dimensions (Natural Geometry. "Geometria intrinsica") <i>See also LGUI</i>
<b>LGXC</b>	Linear hyperspace
<b>LGXD</b>	Curves
<b>LGXE</b>	Roulette
<b>LGXF</b>	Twisted
<b>LGXG</b>	Barycentric analysis
<b>LGXH</b>	Differential geometry <i>See also LGY</i>
<b>LGXI</b>	Line elements of any manifoldness
<b>LGXJ</b>	Quadratic differential forms
<b>LGXK</b>	Transformation
<b>LGXL</b>	Hyperspace of constant curvature
<b>LGXM</b>	Infinitesimal deformation
<b>LGXN</b>	Beez's theorem
<b>LGXO</b>	Riemann's curvature of a space
<b>LGXP</b>	Space of constant Riemann curvature
<b>LGXS</b>	Curvature of the manifoldness
<b>LGXU</b>	Other concepts and theorems
<b>LGXY</b>	Surfaces in space of constant Riemann curvature
<b>LGXZ</b>	Problems

**LGY** Absolute geometry (Non-Euclidean geometry; Metageometry; Pangeometry; Imaginary geometry)

*See also LGA*

LGYA	Euclid's postulate V (Postulate of parallels)
LGYC	Hyperbolic geometry (Lobatchevski)
LGYE	Parabolic geometry (Euclidean)
LGYG	Elliptical geometry (Riemann)
LGYI	Metric relations in projective form
LGYK	Cayley's absolute figure
LGYN	Projective metrics
LGYO	Projective interpretation of the three geometries
LGYR	Beltrami's representation
LGYS	Axiom system of geometry
LGYT	Connection
LGYU	Arrangement
LGYV	Parallels
LGYX	Congruences
LGYY	Continuity (Axiom of Archimedes)

**LGZ** Kinematics. Motion

Kinematics will be fully treated in Physics. Since, however, some may prefer to follow the arrangement in the Sixth Classification, the following general subdivisions are given here:

LGZA	Kinematics of a point
LGZB	Velocity
LGZD	Limited motion
LGZE	Translation
LGZG	Rotation
LGZI	Torsion
LGZK	Continuous motion
LGZL	Accelerated
LGZN	Circulatory
LGZP	Simple harmonic
LGZR	Oscillatory. Wave
LGZT	Kinematics of a plane figure in its own plane
LGZV	Kinematics of a rigid figure
LGZX	Kinematics of a deformable figure
LGZZ	Kinematic mechanism

# **PHYSICS**

## **(Including Mechanics and Kinematics)**

Classification made by Mr. Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

### **SYNOPSIS**

**General and theoretical questions LHAK**

**Kinetic theory of matter LHB**

**Physical units and measurements LHD**

**Mechanics LHF**

**Rational mechanics LHE**

**Kinematics LHH**

**Applied mechanics LHO**

**Technical mechanics LHS**

**Analytical mechanics LHY**

**Dynamics of a particle, etc. LI**

**Statics LIA**

**Kinetics LIJ**

**Ballistics LIO**

**Dynamics of elastic solids LIR**

**Dynamics of fluids LIS**

Hydrostatics LIU

Hydrokinetics LIV

Hydraulics LIW

Aerodynamics LIX

Acoustics LJ

Radiant energy (Optics) LK

Physical optics LKI

Spectroscopy LKX

Physiological optics LKZ

Thermics (Heat) LL

Thermodynamics LLP

Electricity LM

Electrostatics LMC

Electrokinetics LMK

Radioactivity LMR

Thermoelectricity LMU

Magnetism LN

Electromagnetism LNM

LH·2 Study

LH·4 History

LH·5 Dictionaries

LH·6 Tables (General)

For special tables look under the subject

L<sub>H</sub>.7 Periodicals

L<sub>H</sub>.8 Societies

L<sub>H</sub>.9 Collections

## L<sub>H</sub> General works

### L<sub>H</sub>A Laboratories

With local list

### L<sub>H</sub>A K General and theoretical questions

Books generally in L<sub>H</sub>

L<sub>H</sub>AL Aether

L<sub>H</sub>AM Matter. Structure and constitution

L<sub>H</sub>AN Molecules. Atoms. Electrons

L<sub>H</sub>AT Theories and hypotheses

L<sub>H</sub>AU Vortex-atom theory

L<sub>H</sub>AW Electro-magnetic theory

L<sub>H</sub>B Kinetic theory of matter

L<sub>H</sub>BA Heat equilibrium

L<sub>H</sub>BB Entropy. *See also* LLQ

L<sub>H</sub>BC Molecular motion. Molecular speed

L<sub>H</sub>BCI Intramolecular motion

L<sub>H</sub>BCK Molecular free path. Mean free path

L<sub>H</sub>BCM Maxwell's law and proof

LHBCF	Maxwell's second theory
LHBBD	Molecular and atomic energy
LHBDS	Dissociation and disgregation
LHBEE	Ideal and actual gases. <i>See also</i> LLNB
LHBEA	Law of perfect gases
LHBEC	Correction for theoretical law
LHBFI	Anomalies of vapor densities
LHBFD	Direct properties of molecules
LHBFD	Dimensions and number
LHBFM	Molecular weights
LHBG	Viscosity. Internal friction. <i>See also</i> LIZC
LHBGP	Phenomena in rarefied gases
LHBGS	Theory of external friction
LHBGV	Transition to critical state
LHBH	Diffusion. Transpiration. <i>See also</i> LIZG
LHBI	Theories of diffusion
LHBN	Coefficient of diffusion and viscosity
LHBP	Capacity for heat. Heat conduction
LHBS	Absorption. Adsorption. <i>See also</i> LIZD
LHC	Special properties of matter
LHCA	Compressibility
	Elasticity. <i>See</i> LIRA. LISF. LIXF
	Viscosity. <i>See</i> LHBG. LIZB
	Friction. <i>See</i> LIMK. LIVTI. LISW
LHCE	Brownian movement. Pedesis
LHCK	Conservation of matter
LHCL	Physical laws
LHCM	Gravitation and Potential. <i>See also</i> LIB. LIE. LIF

LHCN	Work and energy. Energetics. <i>See also</i> LHYD. LLQ
LHCNA	Abstract dynamics
LHCNM	Mechanical and thermal energy
	Carnot's principle. <i>See</i> LLPH. LLQ
LHCO	Available energy
LHCP	Free energy
LHCR	Van't Hoff's osmotic principle
LHCS	Interfacial phenomena. Liquid films. <i>See also</i> LISK
LHCU	General mathematical theorems
	Vectors <i>See</i> LHGA. LHHR

## LHD Physical units

LHD.6	Tables of constants
LHDA	Standards. Standardizing bureaus
	With local list when necessary
LHDAC	Absolute system. C. G. S. system

## LHDB Physical measurements. Weights and measures

LHDBM	Metric system. Better in RC
LHDC	Other systems
LHDD	Manipulation
LHDDC	Calculation of results
LHDDL	Method of least squares
LHDDR	Ratio between units
LHDE	Measurement of space (Length and breadth) Or in RCA

LHDEA	Instruments
LHDEM	Methods
LDF	Measurement of angles. Or in RCC
LHDFA	Instruments
LHDG	Measurement of volume. Or in RCE
LHDGA	Instruments
LHDH	Measurement of mass and force. Weight. Or in RCF
LHDHA	Instruments
LHDHM	Methods
LHDHM.6	Correction tables
LHDK	Measurement of density. Or in RCG
LHDK.6	Specific gravity tables
LHDKA	Instruments
LHDL	Solids
LHDM	Liquids
LHDN	Gases
LHDO	Measurement of mean density of the earth. <i>See also Lvo</i>
LHDP	Methods
LHDR	Measurement of intensity of gravity
LHDW	Measurement of time. Or in Rcq
LHDWA	Instruments
LHDWM	Methods

## LHDZ Physical paradoxes

## LHE Mechanics

LHF Rational mechanics

LHFA General principles

L <sub>HFB</sub>	Philosophical
L <sub>HFC</sub>	Mathematical
L <sub>HFD</sub>	Mechanical and physical
L <sub>HFD C</sub>	Principle of continuity
L <sub>HFD F</sub>	Actio in distans. Field action. <i>See also L<sub>IF</sub></i>
L <sub>HFF</sub>	Fundamental concepts
L <sub>HFG</sub>	Phoronomy (Phoronomics)
L <sub>HFG C</sub>	Space and time
L <sub>HFH</sub>	Special theories
L <sub>HFI</sub>	Statics
L <sub>HFJ</sub>	Dynamics. The dynamic system
L <sub>HFL</sub>	Pure kinetic theories
L <sub>HFL A</sub>	Elimination of force in kinetics. (W Thomson)
L <sub>HFL D</sub>	Kinetic theory of force. (J. J. Thomson)
L <sub>HFM</sub>	Hertzian mechanics
L <sub>HFN</sub>	Special principles
L <sub>HFO</sub>	Variation (Differential) principle
L <sub>HFP</sub>	Statics
L <sub>HFS</sub>	Dynamics
L <sub>HFT</sub>	Isoperimetric principle
L <sub>HFT F</sub>	Principle of least action. Fermat's law
L <sub>HFT H</sub>	Principle of varying action. Hamiltonian principle
L <sub>HFU</sub>	Integral principle
L <sub>HFU A</sub>	Vis viva (Active force)
L <sub>HFV</sub>	The virial and second law of Thermo dynamics. <i>See also L<sub>HGK</sub></i>
L <sub>HG</sub>	Geometrical foundation of mechanics
L <sub>HGA</sub>	Vector system
L <sub>HGH</sub>	Elementary statics

LHGI	Analytical statics
LHGK	The virial. <i>See also LHFI</i>
LHGM	Astatics (Neutral equilibrium) <i>See also LJAN</i>
LHGHL	Astatic equilibrium (equivalence)
LHGHS	Static axes (Siacci)
LHGR	Geometry of the mass
LHGS	Linear and quadratic moments
LHGV	Higher moments
LHH	Kinematics. <i>See also LGZ</i>
LHHA	Motion. <i>See also LHYA</i>
LHHD	Velocity
LHHI	Accelerated motion
LHHM	Moments Laws of motion. <i>See LIJN</i>
LHHR	Vectors. Vector quantities. <i>See also LHGA</i>
LHI	Kinematics of a point
LHIA	Rectilinear motion
LHIB	Velocity and acceleration
LHC	Special motions
LHID	Uniformly accelerated
LHIE	Periodic Simple harmonic. <i>See LHJ</i>
LHIG	Relative
LHIH	Motion of a piston
LHIJ	Curvilinear motion
LHIK	Velocity and acceleration
LHIL	Acceleration
LHIS	Composition of motion

LHIT	Motion of a projectile. <i>See also LIO</i>
LHIU	Uniform circular motion
LHIZ	Harmonic motion
LHJ	Simple. S. H. M.
LHJA	Amplitude. Phase. Epoch
LHJB	Acceleration
LHJC	Graphic representation
LHJE	Resolution and composition. Harmonic curve
LHJF	Composition of more than two motions
LHJG	S. H. M. in different directions
LHJK	Resisted
LHJL	Oscillatory. Waves. <i>See also LIKL. LITS.</i> Liwo. LJ <sub>B</sub>
LHJM	Traverse and longitudinal vibration
LHJO	Reflexion
LHJP	Refraction
LHJR	Superposition of motions
LHJS	Vibration of a cord and membrane
LHJT	Interference
LHJV	Relative
LHJW	Moving axes
LHJX	Constrained motion of a particle
LHK	Uniplanar kinematics
LHL	Kinematics of a rigid figure
LHLA	Angular velocity and acceleration
LHLAS	Spin
LHLAT	Twist

<b>LHLB</b>	Rotation. Rotation and translation
<b>LHLBA</b>	Acceleration
<b>LHLBC</b>	Composition of rotations
<b>LHLC</b>	Rolling of curve on curve
<b>LHLI</b>	Motion of a rigid body about a fixed axis  Motion of a top and gyroscope. <i>See LHMOR.</i>
	<b>LINB. LINC</b>
<b>LHLM</b>	S. H. M. of rotation
<b>LHLN</b>	Precessional rotation
<b>LHLP</b>	Plane motion
<b>LHLQ</b>	Special motions
<b>LHLT</b>	Crank motion
<b>LHLU</b>	Motion with more than two degrees of freedom
<b>LHLV</b>	Motion in space
<b>LHM</b>	Kinematics of a deformable figure
<b>LHMA</b>	Deformable framework. <i>See also LHNF. LHUV</i>
<b>LHMB</b>	Strain. Stress
<b>LHMBJ</b>	Analytical theory of strains
<b>LHMBK</b>	Composition of strains
<b>LHMC</b>	Stress
<b>LHMD</b>	Kinematics of fluids
<b>LHME</b>	Rotation. Vortex motion
<b>LHMG</b>	Vortical spin
<b>LHMI</b>	Irrational motion
<b>LHMJ</b>	Flow and circulation
<b>LHML</b>	Tubes of flow
<b>LHMN</b>	Velocity system
<b>LHMP</b>	Stream lines and equipotential surfaces
<b>LHMU</b>	Conjugate functions. Screw motion

LHN	Kinematics of mechanism. <i>See also</i> LHU
LHNA	Several planes moving one on another
LHNE	Relative motion. Resultant motion
LHNF	Linkage. Linkwork
LHNI	Pantograph
LHNK	Flexible chain
LHNO	Kinematic chain
LHNT	Toothed wheels
LHNV	Kinematics of a variable system
LHNW	Non-Euclidean motion
LHO	Applied mechanics
LHOA	Mechanics of simple physical apparatus
LHOB	Pendulum. <i>See also</i> LIKF
LHOC	Construction
LHOE	Period of oscillation
LHOG	Pertubating influences
LHOI	Balance
LHOIC	Construction
LHOIH	Oscillation
LHOIW	Weighing, Errors, etc.
LHOJ	Experiments on terrestrial rotation
LHOK	Deviation of a falling body
LHOM	Pendulum motion and rotation of the earth
LHOMD	Disturbing influences
LHOP	Pendulum experiments
LHOR	Gyroscope experiments
LHOS	Gilbert's barograph
LHOW	Mechanical powers
LHP	Physiological mechanics

LHPA	Kinematics
LHPB	Jointed links. Joints
LHPC	Laws of animal motion. <i>See also LHPK. LHQA</i>
LHPD	Dynamics
LHPE	Statics. Muscular statics
LHPG	Equilibrium
LHPK	Kinetics
LHPK	Vis viva and animal locomotion. <i>See also LHPC</i>
LHPL	Equation of motion
LHPM	Special kinetic problems
LHPN	Mechanics of movements of parts of the body
LHPO	Bones and muscles (Backbone, Jaws, Limbs)
LHPW	Breathing
LHQ	Mechanics of movement of the whole body
LHQA	Walking. Animal locomotion. <i>See also LHPC</i>
LHQD	Swimming. Aquatic locomotion
LHR	Mechanics of games and sports
LHRB	Ball
	Alphabetical sub-arrangement as:
LHRC	Baseball
LHRCP	Curve pitching
LHRD	Cricket
LHRG	Golf
LHRK	Billiards. Pool
LHRL	Friction
LHRM	Impact
LHRMC	Carom

LHRN	Boomerang
LHRS	Bicycle riding. <i>See also</i> LINE
LHRX	Miscellaneous problems
LHRY	Motion of a swing
LHS	Technical mechanics
LHSM	Strength of material. General works only. For special topics see Sc
LHST	Structural mechanics. General works only. See also LIG, SD and SE
LHT	Mechanics of machinery
LHU	Kinematics of machinery
LHUC	Motion of the surface of fluid Piston. <i>See</i> LHHH
LHUF	Motion of connected pieces
LHUG	Rolling contact. Wheels
LHUH	Sliding contact
LHUHL	Lateral (Skew-bevel wheels)
LHUHM	Circular (Grooved wheels)
LHUI	Direct (Toothed wheels)
LHUM	Coupling
LHUN	Wrapping contact (Belts, Chains, etc.) Link-work. <i>See</i> LHNF
LHUP	Eccentric
LHUR	Trains of mechanism
LHUS	Wheelwork
LHUV	Aggregate combination

LHUVA	Differential windlass
LHUVD	Differential screw
	Link motion. <i>See</i> LHNF
LHUVX	Parallel motion
LHV	Applied dynamics
LHVC	Deviating forces
LHVD	Machines of uniform velocity
LHVI	Deflecting forces. Governors
LHVM	Machines of varying velocity
LHVR	Fly wheel
LHW	Machines for special purposes. In most cases the books will go with the special subject
LHWA	Observing
LHWC	Copying and drawing
LHWG	Recording. Registering
LHWK	Working
LHWX	Applied energetics
LHXA	Prime movers
LHXE	Sources of energy. General works only
LHY	Analytical mechanics
LHYA	Geometrical theory of motion. <i>See also</i> LHHA
LHYB	Mechanics of a material point
LHYC	Mechanics of a system of points
LHYD	Work and energy. Kinetic and potential energy
LHYE	Application of differential equations
LHYG	Dynamical methods
LHYGA	Equation of work
LHYGC	Equation of motion

LHYJ	Equation of rotation
LHYL	Statics of a material system
LHYM	Statics and kinetics of fluids
LHYR	Equivalence of dynamical problems
LHYS	Cyclical systems
LHYU	Reciprocal relations
LHYX	Approximate methods
LHZ	General theorem of energy and a free rigid body
LHZA	Motion of translation
LHZC	Motion of rotation
LHZE	Rotation of a rigid solid
LHZO	Constrained motion. Oscillation
LHZR	Oscillation about a state of motion
LHZV	Motion of a system of bodies
LHZX	Mathematical treatment of n-body problem

LI      Dynamics of a particle and of a rigid body.

LIA      Statics

LIAE	Equilibrium
LIAI	Equilibrium of motion on a curve
LIAJ	Conical pendulums. <i>See also LHOCT</i>
LIAN	Neutral equilibrium (Astatics) <i>See also LHGM</i>
LIB	Attraction and potential
LIBA	Universal law of attraction. <i>See also LIF</i>
LIC	The potential
LICF	Of an attracting mass
LICG	Of a system of masses
LICK	Of a double sheet
LICL	Equipotential surfaces

LICT	Lines of force. Tubes of force
LICV	Field of force
LICW	Isodynamic surfaces. "Lines of slope"
LID	Theorems
LIDC	Attraction of a thin stratum
LIDK	Circular rings. Anchor rings
LIDL	Attraction of ellipsoids
LIDM	Attraction of various bodies (Rods, discs, etc.)
	Problem of two bodies <i>See</i> LUC
	Problem of three bodies. <i>See</i> LUD
LIDW	Problem of n-bodies
LIE	Gravity
LIEA	Center of mass (center of gravity)
LIEK	Determination of $g$
LIER	Variation in the value of $g$
LIES	Acceleration of $g$
LIET	Determination method
LIF	General gravitation. <i>See also</i> LIBA
LIFA	Newton's law
LIFB	Negative density
LIFC	Actio in distans. <i>See also</i> LHDF
LIFD	Determination of constants
LIFG	Experimental proofs of Newton's law
LIFGA	Relation to mass
LIFGD	Relation to distance
LIFGV	Relation to time
LIFI	Expansion of Newton's law for moving bodies
LIFJ	Expansion for infinitely large masses
LIFM	Mechanical explanation

LIFN	Aether streaming
LIFO	Aether vibrations
LIFP	Aether shock (impact)
LIFS	Relation to electromagnetic phenomena
	Determination of earth's density. <i>See LHD0.</i> Lyo
LIG	Graphic statics
LIGA	Forces in the plane
LIGC	Graphic composition of velocities
LIGL	Reciprocal figures
LIGM	Application of the plane force system
LIGN	Graphic determination of center of mass
LIGP	Graphic determination of moments
LIGR	Central ellipse (nucleus)
LIGS	Forces in space
LIH	Fixed frame work
LIHA	Plane framed structures
LIHB	Determination of tension
LIHC	Framed structures in space
LIHD	Jointed system
LIHG	Determination of tension
LIHI	Support of frames
LIHK	Roof supports. Vaulting
LIHM	Statics of a flexible chain or cord (string)
LIHN	Ideal flexible chain
LIHNH	Heterogeneous chain
LIHO	Equilibrium
LIHP	Chain on a surface
LIHQ	Chain with one end free
LIHS	String under any forces

LIHU	String on a curve
LIJ	Kinetics of a particle or a rigid system
LIJA	Force
LIJB	Dynamical unit
LIJE	Concurring and non-concurring forces
	Mechanical powers. <i>See LHOW</i>
LIJM	Motion
LIJN	Laws of motion
	Rectilinear
LIJP	Parabolic
LIJPV	Projectile in vacuo
LIJR	Elliptic. Kepler's problem
	Accelerated
LIJV	Deflecting force. D'Alembert's principle
LIK	Constrained. Oscillation. <i>See also LHJL.</i> LHZO
LIK <sub>B</sub>	About a fixed axis
LIK <sub>C</sub>	About a state of motion
LIKE	Brachistochrone. Tautochrone
LIK <sub>F</sub>	Pendulum.
LIK <sub>G</sub>	Various kinds of constraint
LIK <sub>H</sub>	Small oscillations. Vibration
LIK <sub>L</sub>	Wave movement. <i>See also LHJL.</i> LITR.
	LIWP
LIK <sub>N</sub>	Vibration of a rod
LIK <sub>P</sub>	Vibration of a cord
LIK <sub>T</sub>	Transverse vibration in plates
LIKU	Figures of Chladni
LIK <sub>V</sub>	Dust figures. <i>See also LISLB</i>
LIK <sub>W</sub>	Compound vibration

L <small>I</small> <b>KX</b>	Motion of a body under no forces
L <small>I</small> <b>L</b>	Motion of a body under any force
L <small>I</small> <b>LH</b>	Forced and free vibration
L <small>I</small> <b>L</b> <i>I</i>	Precession and nutation. <i>See also</i> LSG. LSH
L <small>I</small> <b>L</b> <i>K</i>	Motion in a resisting medium
L <small>I</small> <b>L</b> <i>Q</i>	Motion of a system of bodies
L <small>I</small> <b>L</b> <i>W</i>	Inertia
L <small>I</small> <b>L</b> <i>WA</i>	Coefficient
L <small>I</small> <b>M</b>	Kinetic and potential energy. Work and energy
L <small>I</small> <b>M</b> <i>A</i>	Conservation of energy
L <small>I</small> <b>M</b> <i>G</i>	Graphic representation
L <small>I</small> <b>M</b> <i>GI</i>	Indicator diagram
L <small>I</small> <b>M</b> <i>H</i>	Virtual work
L <small>I</small> <b>M</b> <i>K</i>	Friction
L <small>I</small> <b>M</b> <i>L</i>	Static
L <small>I</small> <b>M</b> <i>P</i>	Kinetic
L <small>I</small> <b>M</b> <i>R</i>	Friction of a fluid on a solid
L <small>I</small> <b>M</b> <i>S</i>	Rolling. Belting
L <small>I</small> <b>M</b> <i>T</i>	Internal. <i>See</i> LISW
L <small>I</small> <b>M</b> <i>T</i>	Kinetics of a rigid system
L <small>I</small> <b>M</b> <i>W</i>	Kinetic reaction
L <small>I</small> <b>N</b>	Rotating bodies. Rotation
L <small>I</small> <b>N</b> <i>A</i>	Motion about a fixed point
L <small>I</small> <b>N</b> <i>AG</i>	Governor
L <small>I</small> <b>N</b> <i>B</i>	Gyroscope. <i>See also</i> LHOR
L <small>I</small> <b>N</b> <i>C</i>	Top
L <small>I</small> <b>N</b> <i>D</i>	Rotation and translation
L <small>I</small> <b>N</b> <i>E</i>	Motion of a bicycle. <i>See also</i> LHRS
L <small>I</small> <b>N</b> <i>F</i>	Motion under no forces

LINK	Moving axes
LINO	Rotating axes
LINP	Compound pendulum
LINR	Impulse. Impact
LINS	Of a sphere
	Billiard ball. <i>See LHRK</i>
LINT	Impulsive change of motion
LIO	Ballistics. <i>See also UIPB</i>
LIOA	Interior
LIOB	Methods of projection. <i>See also UMR</i>
LIOC	Muscular
LIOE	Elastic
LIOF	Compressed air. Pneumatic weapons
LIOG	Electric
LIOH	Chemical
LIOI	Explosives. <i>See also UMGK</i>
LIOJ	Thermodynamic and thermochemical principles
LIOJC	Combustion and temperature of gas
LIOJD	Specific volume and pressure
LIOK	Rapidity of powder combustion
LIOM	Dynamical problems
LIOMD	Detonation
LIOMF	Slow combustion
LIOML	Recent experiments
LION	Strain on the gun
LIONA	Strength. Tension
LIONE	Rifling
LIONI	Recoil
LIOP	Measurement of gas pressures

LIOR	Static methods. Pressure gauges
LIOT	Dynamic methods
LIP	Exterior
LIPA	Air resistance
LIPB	Special ballistic problems
LIPD	Uniform deviation of projectile
LIPE	Influence of wind. (Windage)
LIPF	Influence of the earth's motion
LIPG	Influence of rotation of projectile
LIPH	Lateral deviation
LIPI	Incidental deviation
LIPIM	Distribution of shrapnel shot
LIPIK	Ricochet shot
LIPK	Penetration
LIPK.6	Penetration tables
LTPL	Armor plates
LIPP	Apparatus and methods of measurements
LIPQ	True angle of departure
LIPR	Velocity. Time of flight
LIPS	Special apparatus
LIPT	Photographic methods
LIPU	Other method
LIPV	Initial motions
LIPW	From removal of constraint
LIQ	Kinetics of a flexible chain or cord
LIQA	Motion of an inextensible chain
LIQD	Constrained motion
LIQV	Friction of a rope about a cylinder
LIQW	Flexible surfaces
LIQX	Motion of a membrane

LIR Dynamics of elastic solids

LIRA	Elasticity
LIRC	Moduli
LIRC.6	Tables
LIRD	Constants
LIRE	Stress and strain
LIRF	Deformation
LIRG	Isotropy. Aelotropy
LIRK	Strain
LIRKA	Longitudinal. (Homogeneous)
LIRKL	Radial. (Non-homogeneous)
LIRKN	Small strains
LIRKR	Rotation and strain
LIRL	Shear. Shearing strain
LIRM	Stress
LIRMA	Shearing
LIRME	Virtual work
LIRN	Tension Surface. <i>See</i> LISH Electrical. <i>See</i> LMCI
LIRO	Resistance. Tensile strength Strength of material. <i>See</i> LHSM
LIRP	Traction
LIRQ	Torsion. Bending and twist. Flexure
LIRQA	Torsional strain and stress. Torque
LIRQI	Torsional rigidity
LIRQM	Flexure and torsion of wires
LIRQP	Various torsion problems
LIRR	Elastic vibration. Oscillation

LIRS	Wave motion in isotrophic elastic bodies
LIRT	Elastic lag. Hysteresis. <i>See also</i> LMDW, LNDP
LIRV	Elastic fatigue in metals
LIRW	Impact of elastic solids
LIRWO	Oblique
LIRWR	Resilience
LIRX	Dynamics of an elastic wire
LIS	Dynamics of fluids. (Hydrodynamics. Aerodynamics)
LISA	Geometrical principles
LISB	Vector analysis
LISC	Kinematics and statics
LISD	Exchange effects in the fields
LISE	Molecular forces and effects
LISF	Molecular structure
LISFC	Fluid crystals
LISG	Elasticity. <i>See also</i> LIRA
LISH	Cohesive forces
LISI	Surface tension
LISIN	Induced forms. Plateau's experiment
LISJ	Lamellar condition
LISJF	Films. Soap-bubbles. <i>See also</i> LHCS
LISK	Cohesion figures
LISKB	Breath pictures. Voice figures. <i>See also</i>
	LIKV
LISL	Drop formation
LISLE	Emulsions
LISN	Floating matter
LISNC	Movement of camphor, stearine etc.

LISP	Surface viscosity. <i>See also</i> LIVT
LISPO	Oil on waves
LISO	Capillarity
LISQG	In cylindrical tubes
LISQJ	In non-cylindrical tubes
LISQM	Between two plates
LISQN	Liquid pellicles
LISQR	Steam tension and capillarity
LISQV	Capillary constants and equivalents
LISR	Solubility
LISRA	Dissociated molecules in solutions. Ions. <i>See also</i> LMXD
LISRG	Solution in mixture of several fluids
LISRL	Supersaturation
LISRM	Mutual solution of fluids
LIST	Miscibility and immiscibility
LISTG	Spread of one fluid on another
LISTL	Lamination of fluids
LISU	Diffusion
LISUC	Colloids and crystalloids
LISUD	Dialysis. Diffusion analysis
LISUG	Saturation of sand by liquids and gases
LISV	Osmosis. Endosmosis
LISW	Internal friction. <i>See also</i> LIVTI
LISX	Determination of coefficients
LISZ	Influence of temperature and pressure
LIT	Statics and kinetics of fluids. (Fluids and gases)
LITA	Density. Specific density. <i>See also</i> LIUA. LIXB
LITB	Pressure. <i>See also</i> LIUF. LIXH

LITF	Fluid motion. <i>See also</i> LIVB, LIZE
LITG	Vortex motion. <i>See also</i> LHME, LIZFV
LITI	Vortex lines and filaments
LITJ	Vortex tubes
LITM	Circular vortex
LITN	Plane vortex fields
LITO	Vibration of vortices
LITO	Theorems on the system
LITR	Wave motion. Kumaties. <i>See also</i> LHJL, LIWP, LJB, LKCA
LITRA	Propagation
LITS	Particular kinds of waves
LITT	Standing oscillation. Standing wave
LITL	Special wave phenomena Seiches. <i>See</i> MGFCM "Tidal wave." Bore. <i>See</i> MGDK, MGFBF
LITY	Oscillation of a fluid sphere
LIU	Hydrostatics
LIUA	Density
LIUB	Determination
LIUC	Instruments
LIUD	Methods
LIUF	Pressure
LIUFP	Normal pressure on upper surface
LIUG	Transmission of pressure
LIUH	Measurement
LIUHE	Superficial
LIUHI	Interior
LIUI	Instruments

LIUJ	Lateral pressure
LIUK	Tension
	Superficial. <i>See</i> LITH
LIUL	Equilibrium
LIULM	Mathematical theory
LIULS	Stable and unstable
LIUM	Floating bodies. Buoyancy
LIUMO	Oscillation
LIUMS	Heel produced by propeller
LIUN	Compressibility
LIUN.6	Tables
LIUP	Investigations before Oerstedt
LIUR	Oerstedt's experiments
LIUS	Investigations since Oerstedt
LIUW	Thermic pressure coefficient
LIV	Hydrokinetics
LIVA	Hydrodynamic equations
LIVB	Movement of liquids. Fluid motion
LIVBC	Laminar
LIVBD	Turbulent
LIVBE	Stationary
LIVBH	Fluid rotating as a rigid body
LIVBN	Fluid friction
LIVC	Non-vortical motion
LIVCD	Stream lines. Lines of flow
LIVCJ	Jets and sinks
LIVCR	Discontinuous motion
LIVCT	Three dimensional motion
LIVD	Flow

LIVE	Through rigid tube
LIVF	Through elastic tube
LIVG	Velocity of flow
LIVH	Measurement of pressure
LIVJ	Efflux. Discharge. <i>See also LIWL</i>
LIVJE	Outflow. Energy of jet
LIVJO	Outflow of plastic material
LIVJP	Contact with other currents
LIVJT	Discharge openings
LIVJV	Ajutages
LIVJW	From capillary tubes
LIVK	Energy of waterfall
LIVL	Reaction. Recoil
LIVM	Impact
LIVMD	Of several streams
LIVN	Resistance
LIVNA	Surface cohesion. Surface friction
LIVNF	Frictional resistance in long tubes
LIVNL	Eddys
	Vortices. <i>See LITG</i>
	Wave motion. <i>See LITR</i>
LIVP	Motion of a rigid body in a incompressible fluid
LIVPA	Sphere
LIVPC	Cylinder
LIVPH	Hydrokinetic symmetry
LIVPS	Screw motion. Screw propeller
LIVPU	Pulsating spheres
LIVQ	Motion of vessels and other floating bodies
LIVR	Special problems

LIVRA	Motion in two dimensions
LIVS	Motion in three dimensions
LIVT	Viscous fluids. <i>See also</i> LISP
LIVTE	Equations of motion
LIVTI	Internal friction. <i>See also</i> LISW
LIVTS	Stationary motion
LIVTV	Variable and periodic motion
LIVTW	Motion in tubes and channels
LIW	Hydraulics. <i>See also</i> SL
LIW.6	Tables
LIWB	Flow in tubes and conductors with uniform sides
LIWC	Uniform flow
LIWE	Stationary flow
LIWF	Flow varying with time
LIWG	Ebb and flow at mouth
LIWJ	Flow in tubes and conductors with varying sides
LIWJE	Enlarging and narrowing tubes
LIWJH	Change in direction
LIWL	Outflow from vessels. <i>See also</i> LIVJ
LIWLS	Motion in self-emptying vessel
LIWM	Mouthpieces
LIWN	Overflow on a dam
LIWNA	As periodic efflux
LIWNI	Incomplete overflow
	Energy of the fall. <i>See</i> LIVK
LIWO	Oscillatory motion
LIWP	Waves (especially in water courses) <i>See also</i>
	LHJL. LITR
LIWPL	Swell. Underswell

LIWPR	Rollers. Breakers
LIWPY	Migratory
LIWQ	Oscillation in tubes and vessels
LIWQC	Ram-stroke
LIWS	Ground water motion
LIWSF	Through sand. Filters
LIWST	Flow varying with time
LIWU	Effect of water on a river bottom or sea bed.
LIWV	Hydraulic appliances
LIWX	Motors
LIWY	Pumps
LIX	Aerodynamics
LIXA	Statics. Aerostatics
LIXB	Density. Specific gravity
LIXC	Instruments and apparatus
LIXD	Methods of determining
LIXE	Density of particular gases
LIXF	Elasticity
LIXG	Equilibrium
LIXGB	Buoyancy and flotation
LIXGE	Of a rotating gas
LIXH	Pressure. "Tension"
LIXI	Investigations before Regnault
LIXJ	Regnault's investigations
LIXK	Later observers
LIXL	Pressure under one-half atmosphere
LIXM	Under very high pressure
LIXO	Partial pressure
LIXP	Lateral pressure. Aerostatic paradox

LIXQ	Vapor pressure and curved surfaces
LIXR	Compression
LIXS	Compressibility of various gases
LIXT	Compressibility of mixed gases
LIXU	Compression machines
LIXV	Reduction of pressure. Vacua
LIXW	High vacua. "Fourth state of matter"
LIXX	Air pump
LIY	Temperature and pressure
LIYA	Heating by compression
LIYB	Cooling by expansion
LIYD	Critical pressure. Liquefaction of gases.
	<i>See</i> LLU
LIYDA	Absolute zero. <i>See</i> LLUA
LIYE	Atmospheric pressure
LIYEO	Oscillation of air masses
LIYF	Transmission of pressure
LIYI	Measurement of pressure
LIYK	Barometer
LIYP	Barograph
LIYR	Manometer
LIYW	Stereograph
LIZ	Kinetics. (Aerokiuetics)
	Kinetic theory of gases. <i>See</i> LHB
LIZB	Kinetic energy
LIZC	Internal friction. Viscosity. <i>See also</i> LHBC
LIZCM	Of mixed gases
LIZCP	Influence of temperature and pressure
LIZD	Absorption. Solution. <i>See also</i> LHBS

LIRDA	By solids. Occlusion
LIZDE	By liquids. Solution
LIZDI	By gases. Associated gases
LIZDT	Adsorption
LIZE	Motion of gases
LIZF	Air in motion. Wind. For atmospheric circulation, see MCHN
LIZFI	"Internal work" (Langley) <i>See also</i> MCHN
LIZFV	Vortices. <i>See also</i> MCEA
LIZG	Diffusion. <i>See also</i> LHBH
LIZGE	Through solid bodies
LIZGI	Incandescent metal
LIZGO	Through porous substances. <i>See</i> LIZH
LIZGT	Observations and experiments
LIZH	Instruments and apparatus
LIZH	Transpiration
LIZHA	Through porous substances
LIZHE	Through membrane
LIZI	. Effusion
LIZJ	Thrust and resistance. Recoil
LIZK	Resistance to air movement
LIZKA	By plane surfaces
LIZKE	By vaulted or curved surfaces
LIZL	Flow of gases
LIZLS	Streaming of gases and steam
LIZM	Flow through tubes and conductors
LIZN	Efflux
LIZNL	From small openings

LIZNR	Escape velocity
LIZO	Measurement of flow. Apparatus
LIZP	Movement of rigid bodies in gases
LIZQ	Resistance
LIZQS	Soaring
LIZR	Aeronautics. <i>See also Sz</i>
LIZS	Balloon. <i>See also SzB</i>
LIZT	Dynamic flight. Flying machines. Aerodynamics
LIZU	Aerodrome. Aeroplane. <i>See SzP</i>
LIZV	Dirigible air vessels
LIZY	Miscellaneous pneumatic apparatus
LIZYA	Air motor
	Air gun. <i>See LIOF</i>

## LJ Acoustics (Sound)

LJA	Mathematical theory
LJB	Kinematics of vibration and wave motion. <i>See also LHJL</i>
LJBG	Graphic representation
LJBH	Reflexion and refraction
LJC	Propagation velocity of vibration. <i>See also LJF</i>
LJCA	Longitudinal
LJCD	Transverse
LJCI	In isotropic media
LJCN	In anisotropic media
LJD	Sound waves
LJDA	Amplitude. Wave length
LJDG	Displacement

LJE	Propagation of sound
LJF	Velocity
LJFC	In air and other gases
LJFE	Experimental determination
LJFH	Dependence on temperature
LJFJ	Propagation through fog
LJFL	In liquids
LJFM	Experimental determination
LJFS	In isotropic solids. <i>See also</i> LJCI
LJFT	Experimental determination
LJFV	Numerical values
LJG	Reflexion. Echo
LJGW	Whispering galleries. <i>See also</i> LJQR
LJH	Refraction
LJHA	By wind
LJHT	By varying temperature
LJI	Interference. Diffraction. <i>See also</i> LJSA
LJIG	Stationary waves
LJIK	Diffraction
LJIR	Damping by viscosity
LJIT	Acoustic transparency
LJJ	Vibrations
LJJA	Frequency and pitch
LJJB	Instruments for determining
LJJC	Siren
LJJM	Graphic method
LJJP	Stroboscopic method
LJJR	Manometric flames
LJJS	Lissajou's method

LJJU	Alteration of pitch by motion
LJJV	Limits of audibility
LJJW	Vibration in elastic solids
LJK	Resonance
LJKA	Resonators
LJKD	Analysis and synthesis of the Klang. <i>See also LJTK</i>
LJKL	Acoustic repulsion
LJKS	In isotropic elastic bodies
LJL	Analysis. Measurement of vibration
LJLA	Periodic curve. Harmonic curve
LJLC	Superposition of harmonies
	Musical sound. <i>See LJTR</i>
LJM	Graphic representation. Vibroscopy
LJMA	Phonautograph
LJMC	Phonograph
LJMN	Pendulum apparatus
LJMO	Kaleidophone. <i>See also LJRK</i>
LJMP	Lissajou's figures
LJMQ	Vibroscope. Vibration apparatus
LJMR	Measurement of intensity of sound
LJMW	Analysis of compound vibrations
LJMX	Projection of compound vibrations
LJN	Vibration of stretched strings or wires
LJNH	Harmonies. Overtones
LJNI	Influence of elasticity
LJNL	Longitudinal vibration
LJNT	Trauverse vibration. Mechanical investigations
LJNU	Propagation of tranverse waves
LJNV	Refexion of waves. Stationary waves

LJO	Vibration of rods
LJOA	Longitudinal
LJOF	Transverse
LJOK	Tuning fork
IJP	Vibration of plates (discs) and membranes  Chladni's figures. <i>See</i> LIKU
LJPG	Bells and cylinders
LJPM	Membranes
LJQ	Vibration in pipes and other cavities
LJQA	Closed pipes
LJQD	Open pipes
LJQK	Organ pipes
LJQL	Reeds
LJQN	Tongued pipes
LJQO	Mouth instruments
LJQP	Other cavities
LJQR	Architectural acoustics. <i>See also</i> LJGW
LJQU	Velocity of sound
LJQX	Vibration of liquids in pipes
LJR	Vibrations maintained by heat
LJRC	Singing flames
LJRF	Flame figures
LJRK	Flame kaleidophone
LJRP	Radiophone
LJRS	Sensitive flames
LJRV	Sensitive water-jet
LJRW	Musical sand  Relation to magnetism. <i>See</i> LN1
LJS	Superposition of waves

L <sub>J</sub> S <sub>A</sub>	Interference
L <sub>J</sub> S <sub>F</sub>	Pulsation. Beats
L <sub>J</sub> S <sub>I</sub>	Beats between harmonics (Overtones)
L <sub>J</sub> S <sub>M</sub>	Combination tones
L <sub>J</sub> S <sub>N</sub>	Self-combination (Beat tones)
L <sub>J</sub> S <sub>P</sub>	Differential combination
L <sub>J</sub> T	Physical basis of music. Sensations of tone.
L <sub>J</sub> T <sub>K</sub>	Klang
L <sub>J</sub> U	Tone color (Timbre. Quality)
L <sub>J</sub> U <sub>A</sub>	Without overtones
L <sub>J</sub> U <sub>D</sub>	With harmonic overtones
L <sub>J</sub> U <sub>G</sub>	With inharmonic overtones
L <sub>J</sub> V	Intervals
L <sub>J</sub> V <sub>C</sub>	Consonance and dissonance
L <sub>J</sub> V <sub>P</sub>	Standards of pitch
L <sub>J</sub> W	Physiological acoustics. Voice and ear
L <sub>J</sub> X	Tones of the voice. <i>See also</i> OCNA. QB <sub>EA</sub>
L <sub>J</sub> X <sub>H</sub>	Helmholtz's theory
L <sub>J</sub> Y	Synthesis of the vowels
L <sub>J</sub> Z	The ear. Perception of sound. <i>See also</i> OCIV. QBSI Limits of audible tones. <i>See</i> LJ <sub>JV</sub>
L <sub>J</sub> Z <sub>F</sub>	The ear as a Fourier analyser

## LK Radiant Energy (Optics. Light)

	Aether. <i>See</i> LHAL. LKBA
	Radiation. <i>See</i> LJ <sub>I</sub> J (Caloric radiation) and LMNK (Electric radiation)
LKA	Theories of light. <i>See also</i> LKD

LKAB	Early views
LKAC	Emission
LKAD	Undulatory
LKAF	Fresnel's investigations and theories
LKAM	Mechanical theories
LKAN	Kelvin's contractile aether
LKAO	Later modification of early views
LKAP	Phenomenological treatment
LKB	Electromagnetic
LKBA	Theory of the aether. Free aether vacuum
LKBB	Hertz's theory
LKBC	Maxwell's theory
LKBD	Amplification of Maxwell's theory
LKBL	Blondlot's investigations
LKBP	Various results and theorems
LKBT	Relation to mechanics
LKC	Nature of light
LKCA	Oscillation. Vibration
LKCE	Analysis of white light
LKCL	Theory of damped vibrations
LKCP	Homogeneous radiation
LKCS	Methods of obtaining monochromatic rays
LKCT	Spectrum method
LKCU	Absorption method
LKCV	Multiple reflexion method
LKD	Analytical theory of light
LKDA	Kinematic
LKDG	Dynamic
LKE	Geometrical optics

LKEA	Optical representation
LKEF	Reflexion and refraction
LKER	Refractive indices. <i>See also</i> LKMT
LKES	Dispersion. <i>See also</i> LKV
LKEV	Laws of geometrical radiation
LF	Optical instruments
LKFA	Particular instruments
LKFB	Telescope. <i>See also</i> LYD
LKFC	Microscope. <i>See also</i> MBBC
LKFD	Other
LKFK	Appliances
LKFL	Lenses. <i>See also</i> LKMC
LKFS	Projection system and apparatus
LKFW	Illumination
LKFX	Illumination of the dark field
LKG	Measurement of radiant energy
LKGJ	Light units
LKH	Photometric (Photometry) <i>See also</i> LWJ
LKHA	Photometer
LKHC	Polarizing photometer
LKHE	Interference photometer
LKHF	Spectrophotometer
LKHG	Chemical photometer
	Actinometric (Actinometry) <i>See</i> LWU
	Thermometric (Thermometry) <i>See</i> LLAC
	Thermoelectric. <i>See</i> LMUO
LKHN	Radiomicrometer
LKHP	Bolometer. <i>See also</i> LWM
LKHR	Radiometer

LKHU	Special methods
LKHX	Atmospheric actinometry
LKI	Physical optics
LKIA	Optical representation
	Action of the eye. <i>See</i> LKZS
LKIP	Photographic objective
LKIT	Teleobjective
LKJ	Transformation of radiant energy. Emission. Radiation. <i>See also</i> LLJ
LKJA	Luminescence. <i>See also</i> LMNM, LMQM
LKJH	Fluorescence. <i>See also</i> LMNK, LMMP
	Rontgen rays (X-rays) <i>See</i> LMPR
LKJN	N-rays
LKJO	Nieuglovski rays
LKJP	Phosphorescence. <i>See also</i> LMNL
LKJQ	Chemical action of radiant energy
LKJS	Photography. <i>See also</i> WR Color photography. <i>See</i> LKOT
LKJU	Thermodynamics of radiation
LKJX	Black-body radiation. <i>See also</i> LLJH
LKJY	Pressure of radiant energy
LKK	Propagation. Velocity
LKKA	Methods and results
LKKB	In crystalline media
LKKD	In water
LKKE	In other media
LKKH	Velocity in moving bodies
LKKJ	Influence of the source
LKKN	Reflexion. Refraction and Absorption. <i>See also</i> LKL, LKM, LKU

LKKO	In transparent media
LKKP	In absorbing media
LKKT	Passage of light through metal prisms
LKKV	Selective reflexion and absorption
LKL	Reflexion (Catoptrics)
LKLA	From plane surfaces. Mirrors
LKLM	From curved surfaces. Mirrors
LKLO	Caustic surfaces. Caustics. Diacaustics
	Spherical aberration. <i>See LKMN</i>
LKLR	Metallic reflexion. <i>See also LKUJ</i>
LKLT	Reflexion of electric rays
LKLV	Experimental observations
LKM	Refraction. Aberration
LKMA	With plane surfaces
LKMB	Prisms
LKMBC	With curved surfaces
LKMBS	With spherical surfaces
LKMC	Lenses. Systems of lenses
LKME	Representation by optical systems. Optotechnics
LKMF	Fokometry (Focal distance)
LKMG	Refraction of infra-red and ultra-violet rays
LKMH	Of electric rays
LKMJ	In strained media
LKMN	Spherical aberration
LKMO	Chromatic aberration
LKMO	Homocentric refraction. Anamorphosis
LKMS	Selective refraction
LKMT	Indices of refraction. <i>See also LKER</i>
LKN	Coefficient of refraction

LKN <i>A</i>	Measurement methods
LKN <i>I</i>	Metals
LKN <i>J</i>	Mixtures
LKN <i>K</i>	Liquids
LKN <i>L</i>	Gases
LKN <i>N</i>	Numerical values
LKN <i>O</i>	Astronomical and terrestrial
LKN <i>P</i>	Theories
LKN <i>R</i>	Extinction of light in the atmosphere. Atmospheric absorption
LKN <i>S</i>	Scintillation of stars Color of the sky, rainbow, halo, etc. <i>See</i> MCN Polarization of the sky. <i>See</i> LKR <i>N</i>
LKO	Interference
LKO <i>A</i>	Observations and experiments
LKO <i>B</i>	Fresnel
LKO <i>C</i>	Young
LKO <i>D</i>	Other
LKO <i>E</i>	Spectroscopic analysis of light. <i>See also</i> LKX
LKO <i>G</i>	Interference fringes and bands
LKO <i>I</i>	By quartz threads
LKO <i>J</i>	By isotropic plates
LKO <i>K</i>	Newton's rings
LKO <i>P</i>	Interference methods
LKO <i>S</i>	Interferential refraction
LKO <i>T</i>	Standing light-waves. Color photography
LKO <i>U</i>	Optical resonance
LKO <i>W</i>	Interference of invisible rays
LKP	Diffraction

LKPA	Screen phenomena. Apertures
LKPD	Diffraction gratings
LKPM	Through several openings
LKPN	Diffraction spectra
LKPP	Polarization of diffracted light
LKPT	Measurement of wave length
LKPU	Observations and experiments
LKQ	Double refraction. <i>See also</i> LKTH
LKQA	Anisotropic bodies. Crystals
LKQB	Accidental
LKQE	Theories and investigations
LKQN	Uniaxial crystals
LKQR	Biaxial crystals
LKQW	Conical refraction
LKQX	Determination of wave velocity
LKR	Polarized light. Polarization
LKRA	By reflection and refraction
LKRB	By emission, diffusion and diffraction
LKRD	By fluorescence
LKRK	Elliptic polarization
LKRL	Circular polarization
LKRM	Partially polarized light
LKRN	Atmospheric polarization
LKRP	Polarizing apparatus
LKRQ	Prisms
LKRS	Instruments
LKS	Interference of polarized light
LKSA	Observations and experiments
LKSC	With perpendicular rays

LKSD	With converging rays
LKSK	Chromatic polarization
LKT	Rotatory effects. Rotation of polarizing plane
LKTA	Photogyration. Photogyric substances
LKTB	Allogyric substances
LKTD	Isogyric substances
LKTJ	Rotatory dispersion
LKTM	Methods and results
LKTP	Rotatory polarization of liquids
LKTR	Magneto-gyration. <i>See also</i> LNJI
LKU	Absorption
LKUA	Theories
LKUAE	Electromagnetic
LKUC	Optical constants of metals
LKUG	Absorbing media
LKUH	Crystals
LKUI	Porous substances
LKUN	Absorption of various bodies
LKUP	Solids
LKUR	Liquids
LKUT	Gases and vapors
LKUW	Colored flames
LKV	Dispersion. <i>See also</i> LKES
LKVA	Theories
LKVF	In transparent media
LKVM	Metallic
LKVR	Anomalous dispersion
LKVS	Mechanical theory
LKVT	Electro-magnetic theory
LKVX	Observations and experiments

LKW	Color
LKW'6	Tables. Charts
LKWA	Notation. Nomenclature
LKWC	Sensations of color. Color perception. <i>See also</i> Ociu
LKWH	Helmholtz's theory
LKWCY	Young's theory
	Color blindness. <i>See</i> QKEC
LKWE	Theories
LKG	Experiments and determinations
LKWH	Colors of bodies
LKWM	Mixture of colors
LKWR	Achromasy
LKX	Spectroscopy
LKXB	Spectroscope
LKXC	Prisms
LKXD	Grating
LKXDD	Diffraction grating. <i>See also</i> LKPD
LKXE	Spectroscopes for special purposes
LKXF	Adjuncts. Appliances
LKXG	Other apparatus. Arrange alphabetically
LKXGA	Absorption
LKXGD	Diffraction
LKXH	Spectrophotography
LKXI	Apparatus
	Photometry. <i>See</i> LwJ
LKXK	Application of interference methods
LKXL	Interference apparatus
LKXM	Determination of wave length. Spectrometry
LKXM'6	Tables

LKXN	Wave apparatus. Spectrometer
LKXO	Change of wave length
LKXOA	By pressure
LKXOE	By motion in line of sight
LKXR	Nature and structure of the spectrum
LKXS	Emission spectra
LKXT	Continuous spectra
LKXU	Discontinuous spectra
LKXV	Absorption spectra
LKXW	Plurality of spectra
LKY	Production of spectra
LKYA	Flame
LKYB	Electric spectra
LKYF	Heat spectra
LKYG	Luminescence. Vacuum tube spectra
LKYH	Photoluminescence
LKYI	Fluorescent spectra. Fluoroscope
LKYIP	Phosphorescent spectra. Phosphoroscope
LKYJ	Absorption spectra
LKYK	Gases
LKYL	Metalloids
LKYM	Metals
LKVMC	Metallic compounds
LKYO	Organic compounds
LKYP	Other substances
LKVQ	Series of lines in the spectrum
LKYQA	Observations and experiments
LKYQZ	Zeeman effect. <i>See also</i> LNJU
LKYR	Methods of measurement and observation

LKYS	Visible spectrum
LKYT	Invisible spectrum
LKYU	Infra-red. <i>See also LLJK</i>
LKYV	Ultra-violet
LKYW	Dependence of the spectrum on Density, etc.
LKYWC	Effect of pressure
LKYWG	Influence of temperature
LKYWP	Absorption of light
LKYX	Miscellaneous observations and theories
LKYXH	Measurement of motion
LKYXM	Microspectography
LKYXP	Application to physiology
LKVXT	Application to technology and industry
LKYV	Astronomical spectra The books will go in Lw in most cases.
LKYZ	Atmospheric (Terrestrial) spectra
LKYZA	Aurorae
LKYZL	Lightning
LKYZM	Meteors

## LKZ Physiological optics

LKZA	The eye. Optical system
LKZL	Anomalies. Dioptic faults. <i>See also CK</i>
LKZM	Chromatic aberration
	Color perception. <i>See Lkwc, Ociu</i>
LKZP	Telescopic eye (in animals)
LKZS	Sight. Vision
LKZT	Orthoscopy

LKZW	Astigmatism
LKZY	Optical illusions

## LL Thermics (Heat) Thermodynamics

LLA	Temperature
LLAB	Scales
	Calorimetry. <i>See</i> LLFA
LLAC	Thermometer. Thermometry
LLAD	Thermoscope
LLAE	Liquid
LLAG	Gas
LLAH	Thermometers for special purposes
LLAL	Gravity thermometer
LLAM	Methods for moderately high temperature
LLAN	Electrical
LLAO	Berthelot's refraction method.
LLAOE	Bi-metallic expansion
LLAP	Measurement of high temperature. Pyrometry
LLAQ	Pyrometers
LLAR	Methods
LLAW	Measurement for very low temperature
LLAX	Apparatus
LLAY	Observations and methods
LLAZ	Thermostat
LLB	Expansion
LLC	Solids
LLCE	Coefficient
LLCE.6	Tables

LLCF	Methods of determination
LLCI	Measurement
LLCJ	Methods
LLCM	Expansion of metals
LLCR	Expansion of crystals
LLCU	Expansion of other solids
LLD	Liquids
LLDA	Coefficient
LLDA.6	Tables
LLDE	Volume expansion
LLDM	Mercury
LLDN	Water
LLDR	Aqueous solutions and mixtures
LLDT	Other liquids
LLDV	Liquids under high pressure
LLDY	Theoretical relations
LLE	Gases
LLEB	Methods and results
LLEC	Coefficient
LLED	Expansion and pressure
LLEF	Expansion for high pressure
LLEH	Tension
LLEJ	Influence of pressure. Relation to temperature

## LLF Specific heat. Thermal capacity

LLFA	Measurement. Calorimetry
LLFB	Calorimetric
LLFC	Thermometric
LLFE	Electrical

LLFF	Other methods
LLFG	Correction
LLFI	Solids
LLFJ	Influence of temperature, density, etc
LLFK	Specific heat determinations
LLFL	Metals
LLFM	Alloys
LLFN	Liquids
LLFO	Influence of temperture, etc
LLFP	Specific heat determinations Water. <i>See</i> LLFR
LLFQ	Organic liquids
LLFR	Mixtures
LLFS	Solutions
LLFT	Specific heat of water
LLFU	Investigations and determinations
LLFV	Supercooled water
LLFW	Water at constant volume
LLFY	Thermal units
LLG	Gases and vapors
LLGA	Observations and experiments
LLGB	Under constant pressure
LLGE	At constant volume
LLGF	Methods
LLGG	Determination of $k$
LLGH	Ratio of specific heats
LLGI	Specific heat of steam
LLGJ	Gas and steam at high temperatures
LLGK	Atomic and molecular weights

LLGN	Specific heat relations
LLGN.6	Tables
LLGO	Internal work in solids and liquids
LLGV	Internal and external work in gases
LLGW	Internal work of expansion
LLGX	Experiments

## LLH Transmission (Conduction and radiation)

LLI	Conduction. Conductivity
LLIA	Mathematical treatment
LLIB	Diffusivity
LLIC	Emissivity
LLID	Physical treatment. Conductive capacity
LLIG	Conduction in solids
LLIH	Metals
LLIH.6	Tables
LLIJ	Anisotropic bodies
LLIK	Wood
LLIL	Glass
LLIM	Crystals
LLIP	Conduction in liquids. Convection
LLIP.6	Tables
LLIQ	Methods and results
LLIR	Mixed liquids
LLIT	Particular liquids
LLIU	Conduction in gases

LLIU.6	Tables
LLIV	Methods and results
LLIX	Particular gases
LLIY	Mixed gases
LLJ	Radiation. Emission. <i>See also</i> LKJ
LLJA	Measuring instruments and method. <i>See also</i> LKG
LLJB	Identity of light and heat rays. Thermochrosis
LLJD	Laws of cooling
LLJE	Recalescence. <i>See also</i> LMUJ
LLJG	Relation to temperature
LLJH	Black-body radiation. <i>See also</i> LKJX
LLJI	Radiation of not-absolutely-black bodies
LLJK	Infra-red spectro. <i>See also</i> LKYU
LLJM	Emission
LLJR	Absorption
LLJS	Solids
LLJT	Liquids
LLJU	Gases and vapors
LLJX	Theory of exchanges
LLK	Reflexion
LLKA	From metals
LLKH	From non-metallic surfaces
LLKI	Non-metallic bodies under strong absorption
LLKJ	Diffuse
LLKM	Refraction. Dispersion
LLKN	Observations and measurements
LLKO	Anomalous dispersion in infra-red spectrum
LLKP	Interference. Diffraction
LLKR	Double refraction. Polarization

LLKS	By reflexion
LLKT	By refraction
LLKU	On metallic gratings
LLKV	Resonance
LLKX	Interference and polarizing
LLKY	Rotation of polarizing plane
LLKZ	Electromagnetic rotation
LLM	Absorption. Diathermacy
LLMA	Intigral
LLMB	Solids
LLMD	Liquids
LLMG	Gases and vapors
LLMGA	Steam
LLMN	Spectral
LLMP	Photographic method Infra-red absorption spectra. <i>See</i> LLJR
LLMR	Absorption with thermopile
LLN	Mechanical theory of heat
LLNA	Mathematical treatment
LLNT	Thermoelectricity
LLNV	Endothermic reaction
LLO	Mechanical equivalent of heat
LLOC	Conversion of heat into work
LLOH	Transformation of work into heat
LLOM	Indirect methods
LLON	Apparatus for determination of J
LLOP	Precise measurement of J
LLOQ	Specific heat method
LLOR	Method of friction in water

L <sub>1</sub> O <sub>5</sub>	Electric current
L <sub>1</sub> O <sub>6</sub>	Results of experiments

## LLP Thermodynamics

L <sub>1</sub> L <sub>1</sub> A	First law
L <sub>1</sub> L <sub>1</sub> F	Le Chatelier-Braun principle
L <sub>1</sub> L <sub>1</sub> G	Second law
L <sub>1</sub> L <sub>1</sub> R	Heat engines
L <sub>1</sub> L <sub>1</sub> S	Theory of cyclic transformation
L <sub>1</sub> L <sub>1</sub> U	Principle of reversibility
L <sub>1</sub> L <sub>1</sub> V	Absolute scale
L <sub>1</sub> L <sub>1</sub> Q	Entropy
L <sub>1</sub> L <sub>1</sub> C	Irreversible processes
L <sub>1</sub> L <sub>1</sub> D	Available energy
L <sub>1</sub> L <sub>1</sub> E	Thermodynamic potential
L <sub>1</sub> L <sub>1</sub> G	Thermodynamic motivity. Dissipation of energy
L <sub>1</sub> L <sub>1</sub> H	Thermodynamic relations
L <sub>1</sub> L <sub>1</sub> I	Thermodynamic surfaces, etc
L <sub>1</sub> L <sub>1</sub> J	Thermoelasticity
L <sub>1</sub> L <sub>1</sub> K	Application of thermodynamics
L <sub>1</sub> L <sub>1</sub> M	Thermodynamic change of phase
L <sub>1</sub> L <sub>1</sub> O	Phase equilibrium
	Thermodynamics of radiation. See L <sub>1</sub> K <sub>1</sub> U
L <sub>1</sub> L <sub>1</sub> V	Thermodynamics of galvanic elements
L <sub>1</sub> L <sub>1</sub> W	Relation to principles of mechanics
L <sub>1</sub> L <sub>1</sub> X	Thermodynamics and molecular physics
L <sub>1</sub> L <sub>1</sub> Z	Geometrical representations

## LLR Change of state. (Change of phase)

L <sub>1</sub> S	Solid and fluid state. Fusion. Solidification
L <sub>1</sub> S <sub>B</sub>	Melting and freezing points. Effect of pressure
L <sub>1</sub> S <sub>D</sub>	Latent heat of fusion
L <sub>1</sub> S <sub>F</sub>	Regelation
L <sub>1</sub> S <sub>I</sub>	Melting points of simple substances
L <sub>1</sub> S <sub>K</sub>	Physical mixtures
L <sub>1</sub> S <sub>KC</sub>	Cryohydrates. Cryohydric point
L <sub>1</sub> S <sub>L</sub>	Solidifying point of alloys
L <sub>1</sub> S <sub>Q</sub>	Production of cold by vaporization
L <sub>1</sub> S <sub>R</sub>	Freezing mixtures and apparatus
L <sub>1</sub> S <sub>S</sub>	Solutions
L <sub>1</sub> S <sub>T</sub>	Theories and investigations
L <sub>1</sub> S <sub>V</sub>	Solubility and temperature, pressure, etc
L <sub>1</sub> S <sub>VY</sub>	Solution heat of various substances
L <sub>1</sub> T	Liquid and gaseous state
L <sub>1</sub> T <sub>B</sub>	Boiling. Boiling point
L <sub>1</sub> T <sub>B.6</sub>	Tables
L <sub>1</sub> T <sub>BA</sub>	Relation to pressure
L <sub>1</sub> T <sub>BG</sub>	Influence of absorbed air
L <sub>1</sub> T <sub>BJ</sub>	Saline solutions
L <sub>1</sub> T <sub>C</sub>	Methods of determination. Embulliometry
L <sub>1</sub> T <sub>D</sub>	Vaporization. Vapor pressure
L <sub>1</sub> T <sub>E</sub>	Spheroidal state
L <sub>1</sub> T <sub>F</sub>	Measurement of pressure
L <sub>1</sub> T <sub>G</sub>	Determination of density
L <sub>1</sub> T <sub>H</sub>	Heat of vaporization

LLTP	Critical point
LLTS	Constants
LLTS.6	Tables
LLTX	Dissociation
LLTY	Distillation
LLU	Condensation (liquefaction) of gases
LLUA	Absolute zero
LLUB	Condensation nuclei
LLUC	Methods and results
LLUF	Liquefaction of particular substances. Arranged alphabetically as
LLUG	Air
LLUH	Carbon dioxide
LLUI	Hydrogen
LLUP	Condensation and vaporization of mixed fluids
LLUQ	Theories
LLUW	Particular mixtures
LLV	Saturated vapor. Steam. Hygrometry
LLVA	Tension
LLVB	Methods of determining Water vapor. <i>See</i> LLWA
LLVD	Solutions
LLVG	Mixed fluids
LLVM	Measurement of tension and specific volume
LLVP	Tension and specific volume of various substances
LLVQ	Inorganic bodies
LLVR	Organic bodies
LLVS	Specific volume and density
LLVU	Theoretical determination

LLVX	Experimental determination
LLW	Water vapor. Steam
LLWA	Steam pressure. Tension
LLWA.6	Tables
LLWC	Specific heat
LLWD	Density
LLWE	Methods and results
LLWH	Hygrometry
LLWI	Chemical method
LLWL	Dew-point method
LLX	Superheated vapor.
LLXA	Heat capacity
LLXC	Density. Tension. Thermic expansion
LLXG	Observations on various substances
LLXH	Oxygen
LLXI	Nitrogen
LLXJ	Air
LLXK	Hydrogen
LLXR	Formulas
LLXT	Critical température. Critical point
LLXW	Critical point of mixtures and solutions

## LLY Energy changes into heat energy

LLYA	Sources of heat
LLYC	Combustion
LLYH	Heat values of fuels
LLYS	Solar energy. <i>See also</i> LXMD
LLYW	Animal heat. <i>See also</i> OCDV. QBV

## LLZ Technical Thermodynamics.

Most of the books will go in R, S and T under their respective subjects

LLZA	Machines
LLZC	Caloric
LLZD	Steam-engine
LLZG	Gas-engine
LLZM	Compressed air engine
LLZR	Refrigerating

## LM Electricity

Including Magnetism when both are treated of together

LM·4	History
LM·5	Dictionaries
LM·6	Tables.

Except when placed with the particular subjects

LM·7	Periodicals
LM·8	Societies
LM·9	Collections

## LMA Theories of electricity

LMAB	Fluid
LMAG	Geometrical
LMAI	Mechanical
LMAL	Dynamical
LMAM	Dynamical including the dielectric
LMAR	Edlund's aether

L <sub>MAT</sub>	Election
L <sub>MAW</sub>	Special theories
L <sub>MAWC</sub>	Molecular
L <sub>MAWH</sub>	Hydrodynamic
L <sub>MAX</sub>	Vortex
L <sub>MAZ</sub>	Investigations and experiments

## LMB Electrical measurements. *See also* TFE

L <sub>MBA</sub>	Electrical and magnetic units
L <sub>MBA.9</sub>	Tables
L <sub>MBD</sub>	Evaluation of the ohm
L <sub>MBE</sub>	Dimensions
L <sub>MBF</sub>	Measuring instruments
L <sub>MBG</sub>	Electroscope
L <sub>MBH</sub>	Electrometer
L <sub>MBI</sub>	Galvanometer
L <sub>MBJ</sub>	Electrodynamometer
L <sub>MBK</sub>	Voltmeter
L <sub>MBL</sub>	Wattmeter
L <sub>MBM</sub>	Other
L <sub>MBN</sub>	Accessories
L <sub>MBO</sub>	Methods of measurement

See also the special subjects. In smaller libraries all works on measurement should go here.

Resistance. *See* LMHA

Current. *See* LMG

L<sub>MBP</sub> Determination of E. M. F.

L<sub>MBQ</sub> Induction

LMBQA	Mutual induction
LMBQD	Self induction. Inductance
LMBR	Capacity
LMBS	Absolute measurement
LMBT	Comparison of capacity
LMBU	Specific inductive capacity
LMBV	Potentials
	Magnetic force. <i>See</i> LNCD

## LMBW Apparatus and Machines

*See also* LMZ, LNZ. In smaller libraries, it will be best to put books of LMZ and LNZ here

LMBWA	Dealer's catalogues
LMBX	Electrostatic. <i>See also</i> LMZ
LMBY	Electrokinetic. Electromagnetic. <i>See also</i> LNZ. ODWE

## LMBZ Laboratories

With local list

## LMC Electrostatics

LMCA	Aether stress
LMCB	Tubes of flow. Vortex tubes
LMCE	Electrification
LMCF	Special sources of electrification
LMCG	Electrical field
LMCH	Lines of force. Tubes of force. <i>See also</i> LMCB
LMCI	Electrical stress. Tension
LMCJ	Potential

L <sub>MCJS</sub>	Equipotential surfaces
L <sub>MCK</sub>	Mathematical theory
L <sub>MCL</sub>	Special topics
L <sub>MCX</sub>	Electrokinematics. General works only
L <sub>MD</sub>	Dielectrics
L <sub>MDA</sub>	Cause of dielectric phenomena
L <sub>MDAP</sub>	Dielectric polarization
L <sub>MDB</sub>	Theories of Faraday and Maxwell
L <sub>MDE</sub>	Determination of constants
L <sub>MDF</sub>	Constants of solids
L <sub>MDF.6</sub>	Tables
L <sub>MDG</sub>	Glass
L <sub>MDH</sub>	Constants of crystals
L <sub>MDH.6</sub>	Tables
L <sub>MDI</sub>	Constants of liquids
L <sub>MDI.6</sub>	Tables
L <sub>MDJ</sub>	Organic
L <sub>MDK</sub>	Water
L <sub>MDM</sub>	Liquified gases
L <sub>MDO</sub>	Constants of gases
L <sub>MDO.6</sub>	Tables
L <sub>MDOA</sub>	Air
L <sub>MDP</sub>	Capacity. Electrical energy
L <sub>MDPI</sub>	Specific inductive capacity
L <sub>MDR</sub>	Conduction. <i>See also L<sub>MH</sub></i>
L <sub>MDRI</sub>	Tension in insulators. Electrostriction
L <sub>MDS</sub>	Electrical absorption
L <sub>MDT</sub>	Phenomena of discharge. <i>See also L<sub>MN</sub></i>

L <sub>MDW</sub>	Residual discharge. Hysteresis. <i>See also</i> L <sub>NDP</sub>
L <sub>ME</sub>	Pyro and Piezo electricity
L <sub>MEA</sub>	Molecular theory
L <sub>MEF</sub>	Pyroelectricity. <i>See also</i> L <sub>EU</sub> A
L <sub>MEH</sub>	Results of observations
L <sub>MEI</sub>	Investigations on tourmaline
L <sub>MEJ</sub>	Other crystals
L <sub>MEP</sub>	Piezoelectricity. <i>See also</i> L <sub>EUK</sub>
L <sub>MEQ</sub>	Observations and measurements
L <sub>MET</sub>	Piezoelectrical crystals in the field

## LMF Electric current. *See also* L<sub>MK</sub>

L <sub>MFA</sub>	Voltaic (Galvanic) cell. Voltaic element
L <sub>MFC</sub>	Determination of E. M. F.
L <sub>MFE</sub>	Electric batteries. <i>See also</i> L <sub>MZ</sub>
L <sub>MFF</sub>	Linear current
L <sub>MFI</sub>	Surface leakage. Dissipation of charge
L <sub>MFK</sub>	Branching
L <sub>MFO</sub>	Surface current
L <sub>MFOC</sub>	In curved plates
L <sub>MFT</sub>	Tridimensional current
L <sub>MFU</sub>	Refraction
L <sub>MFX</sub>	Periodic (irregular) current
L <sub>MG</sub>	Current measurement. <i>See also</i> L <sub>MBO</sub>
L <sub>MGA</sub>	Instruments and methods
L <sub>MGB</sub>	Galvanometer
L <sub>MGE</sub>	Electrodynamometer
L <sub>MGH</sub>	Current weighing. Current balance

LMGM	Vibration apparatus
LMGT	Technical current meters
LMGV	Volameter method
LMGX	Other methods and apparatus
LMH	Electric conduction and resistance. <i>See also</i> LMHD
LMHA	Measurement of resistance
LMHB	Instruments. Description and details of construction only. For their use see LMHK
LMHC	Rheostat
LMHG	Wheatstone bridge
LMHJ	Resistances
LMHK	Methods
LMHL	Absolute measure
LMHM	Compensation methods
LMHN	Measurement of resistance
LMHS	Metallic conductors
LMHT	Electrolytes
LMHU	Dielectrics
LMHV	Internal resistance of cells
LMI	Conductivity and resistivity
LMIA	Standards of measure
LMIB	Pure metals
LMIB.6	Tables
LMIP	Alloys and amalgams
LMIQ	Alloys
LMIQ.6	Tables
LMIR	Amalgams
LMIR.6	Tables

L <sub>MIS</sub>	Relation to heat conductivity
L <sub>MIT</sub>	Other metallic and non-metallic conductors
L <sub>MIV</sub>	Metallic crystals
L <sub>MIV</sub>	Dielectrics
L <sub>MIVW</sub>	Volume resistivity
L <sub>MIVW.6</sub>	Tables
L <sub>MIX</sub>	Mass resistivity
L <sub>MIX.6</sub>	Tables
L <sub>MJ</sub>	Electrolytic conduction. <i>See also L<sub>MX</sub></i>
L <sub>MJ.6</sub>	Tables of conductive equivalents
L <sub>MJA</sub>	Conductivity of aqueous solutions
L <sub>MJD</sub>	Theory of electrolytic dissociation
L <sub>MJL</sub>	Thermal phenomena
L <sub>MJS</sub>	Influence of pressure, light and magnetism
L <sub>MJW</sub>	In non-aqueous solutions
L <sub>MJX</sub>	In uniform material
L <sub>MJY</sub>	In liquified salts

## L<sub>MK</sub> Electrokinetics. Electrodynamics

L <sub>MKA</sub>	Dynamical theory of the current
L <sub>MKB</sub>	Maxwell-Hertz theory
L <sub>MKC</sub>	Mutual action of currents
L <sub>MKD</sub>	Ponderomotive action of stationary current
L <sub>MKF</sub>	Induction. Inductance
L <sub>MKG</sub>	Theories
L <sub>MKI</sub>	Mutual induction

LMKIS	Eddy currents. Foucault's currents
LMKJ	Self induction. Inducrance
LMEN	Induction apparatus
LMKO	Alternating currents
LMKT	Choke coils (Impedance coils)
LMKU	High frequency current
LMKV	Polyphase current
LMKW	Measurement
LMIL	Passage of electricity through gases
LMLA	Mathematical theory
LMM	Ionization and electrizations. Ions. Electrons
LMMA	Ionic energy
LMMB	Recombination ( <i>Molizerung</i> )
LMMC	By temperature
LMMI	By ion impact
LMML	By ultra-violet light
LMMN	Photo-electric effects
LMMR	By Rontgen (X) rays
LMMS	Secondary radiation
LMMT	By Becquerel rays
LMMU	Electrization
LMN	Electric currents in gases
LMNA	Dependent current
LMNF	Current in flame
LMNG	Independent current
LMNH	Convective discharge
LMNI	Brush
LMNJ	At low pressure. Glow

L <sub>MN</sub> JN	Striated discharge
L <sub>MN</sub> JV	High vacuum effects
L <sub>MN</sub> K	Cathode rays
L <sub>MN</sub> L	Phosphorescence
L <sub>MN</sub> M	Thermoluminescence
L <sub>MN</sub> N	Mechanical effects
L <sub>MN</sub> O	Disruptive discharge
L <sub>MN</sub> R	Influence of gas pressure, electrode material, etc
L <sub>MN</sub> T	Spontaneous discharge
L <sub>MN</sub> U	Mechanical effects
L <sub>MN</sub> V	Effects of light
L <sub>MN</sub> X	Electric (dust) figures
L <sub>MO</sub>	Migration of ions
L <sub>MO</sub> I	Ionic velocities
L <sub>MO</sub> P	Charge on the ions
L <sub>MO</sub> Q	In electrolytes
L <sub>MO</sub> R	In gases
L <sub>MO</sub> V	Separation of the ions
L <sub>MO</sub> W	Diffusion in non-ionized gases
L <sub>MO</sub> Z	Ionic radiation
L <sub>MP</sub>	Cathode rays
L <sub>MP</sub> A	In the electric field
L <sub>MP</sub> B	In the magnetic field
L <sub>MP</sub> E	In the air
L <sub>MP</sub> F	In other gases
L <sub>MP</sub> I	Dispersion. Secondary rays. <i>See also</i>
	LMMS. LMRM
L <sub>MP</sub> K	Transmission through solids. Leuard rays
L <sub>MP</sub> L	Reflexion

L <sub>M</sub> P <sub>P</sub>	Positive rays. (Canal rays. Goldstein rays)
L <sub>M</sub> P <sub>Q</sub>	Magnetic deflexion
L <sub>M</sub> P <sub>R</sub>	Rontgen rays (X-rays) <i>See also T<sub>H</sub>X</i>
L <sub>M</sub> P <sub>S</sub>	Velocity
L <sub>M</sub> P <sub>T</sub>	Absorption
L <sub>M</sub> P <sub>V</sub>	Diffraction
L <sub>M</sub> P <sub>X</sub>	Scattering of the negative electrodes N-rays. <i>See L<sub>K</sub>J<sub>N</sub></i>
L <sub>M</sub> Q	Forces on the ions
L <sub>M</sub> Q <sub>A</sub>	Electric
L <sub>M</sub> Q <sub>P</sub>	Contract
L <sub>M</sub> Q <sub>D</sub>	Condensation nuclei. Drop formation
L <sub>M</sub> Q <sub>E</sub>	E. M. F. by ionic diffusion
L <sub>M</sub> Q <sub>F</sub>	Magnetic
L <sub>M</sub> Q <sub>FI</sub>	Influence of the magnetic field
L <sub>M</sub> Q <sub>G</sub>	Hall effect. <i>See also L<sub>N</sub>X<sub>C</sub></i>
L <sub>M</sub> Q <sub>H</sub>	Physical and chemical effects
L <sub>M</sub> Q <sub>I</sub>	Thermal
L <sub>M</sub> Q <sub>J</sub>	Temperature of the ions
L <sub>M</sub> Q <sub>L</sub>	Optical
L <sub>M</sub> Q <sub>M</sub>	Electroluminescence
L <sub>M</sub> Q <sub>N</sub>	Crookes-tube phenomena. <i>See also L<sub>M</sub>N<sub>K</sub></i>
L <sub>M</sub> Q <sub>NT</sub>	Influence of temperature, etc.
L <sub>M</sub> Q <sub>O</sub>	Illumination of mixed gases
L <sub>M</sub> Q <sub>P</sub>	Fluorescence
L <sub>M</sub> Q <sub>R</sub>	Illumination of solids
L <sub>M</sub> Q <sub>S</sub>	By cathode rays
L <sub>M</sub> Q <sub>T</sub>	By positive rays
L <sub>M</sub> Q <sub>W</sub>	Chemical

# LMR Radioactivity

LMRA	Radioactive processes
LMRB	Theories, etc.
LMRC	Atomic constitution
LMRD	Atomic instability and disintegration
LMRG	Methods of measurement
LMRH	Becquerel's observations. Becquerel rays
LMRI	Alpha rays. <i>See also</i> LMSC et seq.
LMRIA	Velocity
LMRIJ	Scattering
LMRIN	Absorption
LMRJ	Beta rays. <i>See also</i> LMSC et seq.
LMRK	Gamma rays. <i>See also</i> LMSC et seq.
LMRM	Secondary rays. <i>See also</i> LMMS. LMPI
LMRN	Terrestrial radioactivity
LMRNA	Atmosphere
LMRO	Earth
LMRP	Water
LMRR	Radioactive transformations. <i>See also</i> LMS
LMRS	Constants and measurements
LMRT	Rayless transformation
LMRV	Inactive products
LMS	Radioactive substances
LMSB	Radium
LMSC	Rays (Alpha, Beta, Gamma rays)
LMSCA	Alpha particles
LMSD	Transformation products

L <sub>MSE</sub>	Emanation
L <sub>MSF</sub>	Active deposit. (Radium A, B, etc.)
L <sub>MSG</sub>	Rayless transformation
L <sub>MLH</sub>	Helium
L <sub>MSHR</sub>	Radiolead
L <sub>MSHV</sub>	" <i>Radiobes</i> "
L <sub>MSI</sub>	Origin ("parent") of radium
L <sub>MSJ</sub>	Thorium
L <sub>MSK</sub>	Rays
L <sub>MSL</sub>	Transformation products
L <sub>MSM</sub>	Radiothorium
L <sub>MSN</sub>	Ionium
L <sub>MSO</sub>	Uranium
L <sub>MSP</sub>	Rays
L <sub>MSPC</sub>	Connection with radium
L <sub>MSQ</sub>	Transformation products
L <sub>MSR</sub>	Actinium. Emanium
L <sub>MSS</sub>	Rays
L <sub>MST</sub>	Transformation products
L <sub>MSU</sub>	Polonium
L <sub>MSV</sub>	Ray
L <sub>MSVC</sub>	Connection with radium F
L <sub>MSZ</sub>	Radioactive substances
L <sub>MSZC</sub>	Clevite
L <sub>MSZP</sub>	Pitchblende

## LMT Atmospheric electricity. *See also McM*

L <sub>MTA</sub>	Electrical potential
L <sub>MTB</sub>	Daily and yearly variation

LMTC	Variation in the upper air
LMTD	Measuring instruments and methods
LMTE	Electric conductivity
LMTF	Daily and yearly conduction
LMTH	Ionization of the air. Atmospheric electrization.  <i>See also</i> MCEI
LMTI	Measuring instruments and methods
LMTN	Current electricity in the air
LMTP	Precipitation. Thunderstorms. <i>See also</i> McIV. MCIP
LMTQ	Photography of discharge  Aurora. <i>See</i> LNLP. LXQI

## LMU Thermoelectricity

LMUA	Thermocurrent. Thermoelectric junction
LMUB	Volta effect
LMUC	Seebeck effect  Peltier effect
LMUE	Thermo element of E. M. F.
LMUF	Measurement
LMUG	Thermoelectromotive force
LMUH	Hysteresis
LMUI	Temperature variations
LMUJ	Recalescence. <i>See also</i> LLJE
LMUK	Liquid metals
LMUN	Thermoelectric formulas
LMUP	Peltier effect
LMUR	Thomson effect
LMUS	Thomson's thermodynamic theory
LMUT	Tait's hypothesis

LMUY	King's experiments
LMV	Special problems and experiments
LMVC	Conduction and convection theories
LMVG	Thermoelectric relations
LMVH	Application to temperature measurements
LMVHA	Thermopile
LMVM	Heating action from resistance
LMVN	Application of voltaic heat production

## LMVP Theory of the voltaic(galvanic) element

LMVQ	Thermodynamic theory
LMVR	Kinetic theory

## LMVS Contact electrification

.	Electrolytic solution. <i>See</i> LMJ, LMK
LMVX	Capillary electric methods
LMVY	Drop electrodes

## LMW Voltaic (galvanic) polarization

LMWE	Methods of measurement
LMWP	Polarization by alternating current
LMWS	Influence on friction and tension

## LMX Electrolysis

LMX.6	Tables of conductive equivalents
LMXB	Theories of electrolytic action
LMXD	Electrolytic dissociation and ion migration. <i>See also</i> LISRA

L <sub>M</sub> XK	Polarization
L <sub>M</sub> XL	Resistance of electrolytes
L <sub>M</sub> XN	Local action. Amalgamation
L <sub>M</sub> XP	Electrolysis of various substances
L <sub>M</sub> XR	Various phenomena
L <sub>M</sub> XS	Separation of metals Electro-deposition <i>See RER</i>
L <sub>M</sub> XT	Fog formation
L <sub>M</sub> XV	Nobili's rings. Guebhard's rings (Metallochromes)
L <sub>M</sub> XX	Movement phenomena in the electrodes

## L<sub>M</sub>Y Electrical endosmosis

L <sub>M</sub> YI	Theoretical explanation
L <sub>M</sub> YO	Various experiments and results
L <sub>M</sub> YP	Action of colloids
L <sub>M</sub> YQ	Electrostenolysis (Braun)

## L<sub>M</sub>Z Accumulators (Condensers Storage batteries) *See also TEV, TGT*

L <sub>M</sub> ZC	Chemical theory
L <sub>M</sub> ZD	Particular types
L <sub>M</sub> ZP	Local action
L <sub>M</sub> ZQ	E. M. F.
L <sub>M</sub> ZR	Charge and discharge

# LN Magnetism

## LNA Magnets

Natural. *See* LNFC

LNAB Artificial

Electromagnet. *See* LNMA.

LNAM Magnetic needle. *See also* LZL

LNAC Poles. Directive force

LNAE Mutual action of magnets

LNAH Oscillation

## LNB Magnetization

LNBA Lines of force

LNBF Fields

LNBN Constitution of magnet and field

LNBO Molecular magnets

LNBP Various hypotheses

LNBR Linear magnets. Magnetic filaments

LNBT Exterior action

## LNC Magnetic measurements

LNCA Instruments and methods

LNCB Magnetometer

LNCD Measurement of magnetic force (Intensity)

LNCE Horizontal component

LNCI	Vertical component
LNCM	Relative measurement of intensity and direction
LNCN	Comparison of terrestrial fields. With local list
LNCO	Measurement of permeability and susceptibility
LNCP	Measurement of magnetic field
LNCR	Magnetometer method
LNCS	Hydrostatic method
LNCY	Optical method
	Measurement of induction. <i>See LNDK</i>

## LND Magnetic induction

LNDA	Theoretical
LNDB	Application to particular bodies
LNDD	Magnetic current and circuit
LNDF	Molecular theory
LNDJ	Experimental
LNDK	Methods and measurements
LNDKD	Electrodynamic
LNDKM	Electromagnetic
LNDL	Magnetization and induction
LNDM	Experiments with particular bodies
LNDN	Particular phenomena
LNDO	Screen action
LNDP	Residual magnetism. Hysteresis, etc.
LNDQ	Remanence
LNDS	Theorems and formulae
LNDW	Periodic phenomena

## LNE Diamagnetism. Paramagnetism, etc.

LNEA	Theoretical treatment
LNEE	Physical and other theories
LNEF	Methods and apparatus
LNEG	Results
LNEI	Quantitative determination
LNEJ	Chemical relations
LNF	Paramagnetism. (Ferromagnetism. Sideromagnetism)
LNFA	Iron and steel
LNFC	Magnetite
LNFE	Nickel
LNFH	Magnetic alloys of non-magnetic constituents
LNFI	Cobalt
LNFL	Amalgams
LNFM	Crystal magnetism. Magne-crystalline action
LNFP	Ferromagnetic crystals
LNFR	Observations and measurements
LNFS	Fluid crystals

## LNG Physical relations

LNH	To mechanics
LNHI	Magnetostriction
LNI	To sound
LNIA	Influence of vibration
LNIP	Propagation by magnetism
LNIT	Telephony
LNIU	Telephone. <i>See also</i> RYT. SNE
LNIX	Microphone
LNIV	Wireless telephony
LNJ	To light. Magneto-optics. <i>See also</i> LKB

LNJ <sub>A</sub>	Passage of light through magnetic bodies
LNJ <sub>C</sub>	Polarization
LNJ <sub>R</sub>	Magnetic rotation. <i>See also LKTR</i>
LNJ <sub>K</sub>	Determinations and measurements
LNJ <sub>L</sub>	Magnetic action in emission and absorption
LNJ <sub>M</sub>	Magnetic reflexion
LNJ <sub>R</sub>	Magnetic double refraction
LNJ <sub>U</sub>	Zeeman effect. <i>See also LKYQZ</i>
LNJ <sub>V</sub>	Faraday effect
LNJ <sub>W</sub>	Kerr effect
LNJ <sub>X</sub>	MacLuso-Corbin effect
	Hall effect. <i>See LNXC</i>
LNK	To heat. Thermomagnetism
LNKA	Influence of temperature
LNKB	High temperature
LNKD	Low temperature
LNKL	Heat effect of magnetization
LNKM	Methods of measurements
LNKP	Relation to various properties
LNKR	Chemical and thermal relations

## LNL Terrestrial magnetism

LNL,A	Measurement
LNL,B	Instruments
LNL,C	Methods
LNL,D	Observatories
	With local list
LML,E	Magnetic surveys
	With local list

LNLF	Magnetic elements
LNLF.6	Tables
LNLG	Local phenomena. Magnetic lines
LNLGA	Isomagnetic
LNLGD	Declination. (Isogons)
LNLGF	Inclination. (Isoclines)
LNLGI	Intensity. (Isodynamic lines)
LNLGM	Lines of force and of magnetic equilibrium
LNLH	Periodic phenomena
LNLI	Diurnal inequality
LNLJ	Annual inequality
LNLK	Long-period inequality
LNLL	Secular changes
LNLM	Laws of magnetic disturbances
LNLN	Magnetic storms. <i>See also</i> LXMN
LNLP	Polar light. <i>See also</i> LXQI. MCMP
LNLQ	Earth circuits
LNLR	Physical theories and observations

## LNM Electromagnetism

LNMA Electromagnets. *See* LNZ for electromagnetic machinery

LNMB Construction

LNMM Forms

LNN Magnetic quantities

LNN.6 Tables

Electromagnetic units. *See* L<sub>MBA</sub>

L <sub>NO</sub>	Magnetism by electric current
L <sub>NOC</sub>	Circular magnetization
L <sub noi<="" sub=""></sub>	Magnetization of iron
L <sub noj<="" sub=""></sub>	Other substances
L <sub>NP</sub>	Action of the current on magnet
L <sub>NPF</sub>	Magnetic field and potential
L <sub>NP R</sub>	Circuit action
L <sub>NQ</sub>	Equivalence between current and magnet
L <sub>NR</sub>	Action of magnet on electric current
L <sub>NR F</sub>	Action of field on conductor
L <sub>NR P</sub>	Deformation by electromagnetic action
L <sub>NS</sub>	Electromagnetic induction. (Voltaic induction)
L <sub>NSE</sub>	Earth inductor
L <sub>NSP</sub>	Foucault's currents
L <sub>NT</sub>	Transference of electromagnetic energy
L <sub>NTD</sub>	Displacement currents
L <sub>NT E</sub>	Electric oscillations. Electric waves
L <sub>NTG</sub>	Propagation. Transmission
L <sub>NTL</sub>	Reflexion
L <sub>NTM</sub>	Refraction
L <sub>NTN</sub>	Polarization
L <sub>NTO</sub>	Dispersion. Scattering
L <sub>NTS</sub>	Syntony. Resonance
L <sub>NU</sub>	Oscillation of small wave-length

LNUA	Hertz's experiments
LNUE	Radiation. Direction of vibration
LNUH	Detection of oscillation. Resonator. Receiver
LNUQ	Coherer. Detector
LNUW	Wireless telegraphy. <i>See also</i> SND
LNV	Electromagnetic theory of light. <i>Better in LKB</i>
LNW	Electromagnetic rotation and vibration
LNWA	Magnet about a current
LNWC	Current about a magnet
LNWF	Fluid rotations
LNWI	Interruption and vibration apparatus
LNX	Hall and allied phenomena
LNXA	Tranverse effect
LNXB	Galvano-magnetic effect
LNXC	Hall effect
LNXD	Law of the Hall effect
LNXH	Ettinghausen effect
LNXH	Thermometric effect
LNXI	Nernst effect
LNXJ	Leduc effect
LNXL	Longitudinal effect. <i>See also</i> LNXB. LNXH
LNXN	Reverse effects
LNXP	E. M. F. of magnetization
LNXR	Influence of magnetization on thermoelectricity
LNXT	Theories on the Hall group of phenomena

LNZ Electromagnetic machinery. *See also* TED

<b>LNZA</b>	Simple machines
<b>LNZD</b>	Dynamo-electric machines
<b>L NZE</b>	Conduction and current division
<b>L NZF</b>	High-tension current
<b>L NZG</b>	Unipolar machines
<b>L NZH</b>	Continuous current machines
<b>L NZI</b>	Alternating current machines
<b>L NZJ</b>	Motors
<b>L NZK</b>	Continuous current
<b>L NZL</b>	Synchronous
<b>L NZM</b>	Asynchronous
<b>L NZP</b>	Transformers (Converters) etc.
<b>L NZPB</b>	Rotary
<b>L NZPC</b>	Continuous current
<b>L NZPH</b>	Polyphase
<b>L NZPL</b>	Alternating current
<b>L NZPQ</b>	Constant potential
<b>L NZS</b>	Motor generator
<b>L NZT</b>	Dynamometer
<b>L NZV</b>	Regulators. <i>See also TEL</i>
<b>L NZW</b>	Rectifier
<b>L NZX</b>	Induction coil



# ASTRONOMY

Classification made by Mr. Richard Bliss, librarian of the Redwood Library, Newport, R. I. I have made slight changes and fitted a notation. C. A. C.

## SYNOPSIS

- Generals Lr·1-9
- History of astronomy Lr 11-99 or Lra
  - Cosmogony Lry
  - Spherical astronomy Ls
  - Theoretical astronomy Lt
  - Celestial mechanics Lu
  - Practical astronomy Lv
  - Astrophysics Lw
- Applied astronomy, Geodesy Ly
- Nautical astronomy Lz

- LR·5 History. *See* LRA
- LR宣 Dictionaries
- LR·6 Tables (General)
  - For special tables look under the subject.
- LR·7 Periodicals (including Annuals)
  - For calendars and almanacs see spherical astronomy Lsw.
- LR宣 Societies
- LR宣 Collections
- LR General and Miscellaneous works

## LRA His tory of Astronomy

May be arranged by the local list or by the following table.

- LRB Astrology
  - LRC Prognostications
  - LRD Nativity and horoscope
  - LRE Natural astrology (Primitive astronomy)
- LRF Empirical astronomy (Dawn of astronomy)
  - LRG China
  - LRI India
- LRK Astronomy of the ancients
  - LRL Syria and Phenicia
  - LRM Arabia
  - LRN Babylonia and Chaldea
  - LRO Assyria
  - LRP Persia
  - LRO Egypt
    - LRP The Pyramids (in their astronomical aspect)

(1)

LRS	Greece
LRT	School of Alexandria
LRU	Rome
LRV	Astronomy of the Middle Ages
LRW	Astronomy of the Renaissance
LRX	Modern Astronomy

## LRY Cosmogony

LRYC	Cosmic evolution
LRYE	Nebula hypothesis
LRYI	La Place's theory
LRYJ	Faye's theory
LRYK	Darwin's tidal reaction
LRYL	Lockyer's hypothesis
LRYN	End of the world
LRYO	Structure of the universe
LRYP	Herschel's theory
LRYR	Space and its temperature
LRYS	Age of the solar system
LRYT	Movement of the solar system in space
LRYU	Ethereal friction
LRYV	Astrognosy
LRYX	Magnitudes, situation, and distances of the stars
LRYY	Constellations
LRYZ	Star names

## Ls Spherical astronomy

LsA	Coördinates
LsB	Conversion of coördinates
LsBE	Calculation of ephemerides
LsC	Refraction
LsC'6	Refraction tables
LsD	Aberration
LsE	Reduction to meridian
LsF	Reduction to apparent position
LsG	Precession, Precession of the equinoxes
LsH	Nutation
LsI	Parallax, and its calculation
LsI'6	Parallax tables
LsJ	Correction for elevation, Dip of horizon
LsK	Diameter and semi-diameter
LsL	Proper motion
LsL'6	Tables of proper motion
LsM	Diurnal arcs, Rising and setting
LsN	Altitude and azimuth
LsN'6	Azimuth tables, Azimuth constants

Lso	Declination and Right ascension
Lsp	Celestial latitude and longitude
Lsq	Geocentric and Heliocentric position
Lsq.6	Position tables
Lsr	Polar elevation
Lss	Polar variation (Wandering of the pole)

## Lst Chronology, Time

Lst	Lst-Lsz may be in Fc.
Lsu	Determination of time <i>See also</i> Practical astronomy, Instruments, Lvb
Lsv	Equation of time

## Lsw Calendars

Lswa	<i>i.e.</i> , Works about the Calendar
Lswe	Calendar and astronomical cycles
Lswi	Reformation of the calendar
Lswo	Century controversy
Lswu	General and perpetual calendars
Lswy	Ecclesiastical calendars
Lsx	Date of Easter
Lsy	Calendars <i>i.e.</i> , Individual calendars arranged by years, as Lsx 1904, a calendar for 1904. If preferred calendars may be arranged by nations or countries with a sub-arrangement by years.
Lsz	Ecclesiastical calendars Individual, arranged by years. This may be omitted, and all calendars arranged under the previous heading.
	Almanacs (Astronomical) and Ephemerides (general) Arranged by years.

## Lt Theoretical Astronomy

Lta	True and apparent motion
Ltb	Heliocentric movement, Elliptic motion
Ltc	Kepler's problem
Ltd	Geocentric movement
Lte	Retrogradation
Ltf	Theory of eclipses, transits, etc.
Ltfc	Calculation of eclipses
Ltg	Rotation of planets
Lth	Geometric problems connected with Rotation
Lti	Orbit determination
Ltj	Planets and satellites.
Ltja	Mercury
Ltjb	Venus
Ltjc	Earth
Ltje	Moon
Ltjf	Mars

LTJJ	Satellites
LTJJO	Phobos
LTJJU	Daimos
LTJK	Planetoids (Minor planets)
	Arrange alphabetically by number and name as: 433 (Eros)
LTJL	Jupiter
LTJM	Satellites
	Arrange as in LxUL-LxUT
LTJN	Saturn
LTJO	Satellites
	Arrange as in LxVL-LxVZ.
LTJP	Uranus
LTJR	Satellites
	Arrange as in LxW0-LxWY
LTJS	Neptune
LTJT	Satellite
LTK	Comets
	Arrange chronologically as in Astrophysics — <i>Comets Lxy.</i> e.g., LxTK 1858 F (Donati)
LTM	Binary stars
	Arrange by letter or number preceding the name of the constellation, as: $\lambda$ Boötis, $\mu$ Ophiuchi, 82 Ceti.
LTN	Path of Meteors and Shooting stars
LTO	Elements (Eccentricity, Inclination)
LTP	Planets and satellites
	Sub-arrange as before
LTQ	Comets
	Sub-arrange as before.
LTS	Binary stars
	Sub-arrange as before.
LTT	Variable stars
LTU	Discovery, numbering, and nomenclature
LTV	Tables and Ephemerides
LTW	Planets and satellites
	Arrange as in LxN.
LTX	Comets
LTY	[Other]
Ltz	Interpolation of formulæ

## Lu Celestial mechanics

LUA	Laws of motion
LUB	Attraction, problems of
LUC	Problem of two bodies
LUD	Problem of three bodies
LUE	Attraction of spheroids
LUF	Perturbation, General

LUG	Gravitation
LUH	Kepler's laws
LUI	Tides
LUIB	Tidal friction
LUJ	Oscillations of the atmosphere
LUK	Mass and weight
LUL	Sun
LUM	Planets and satellites Sub-arrange as in LXX.
LUN	Comets Sub-arrange as in LTK.
LUO	Stars Sub-arrange as in LXD.
LUP	Planetary movements
LUR	Satellites of Jupiter
LUS	Secular variation of orbit
LUT	Libration
LUTE	Planetary
LUTI	Lunar
LUU	Perturbation
LUUC	Planetary
LUUD	Tables
LUUL	Lunar
LUUP	Cometary
LUW	Inclination of axis
LUX	Obliquity of the ecliptic
LUY	Revolution of the apsides

## Lv Practical astronomy

### LvA Observatories

LVAC	Construction
LVAM	Mountain observatories
	Astrophysical observatories. <i>See</i> Astrophysics. [Individual observatories]
LVAO or LVAT	Description Arrange by name in one alphabet; or (better) by countries with alphabetical sub-arrangement, the U. S. in one alphabet, not separately by states.

LVAR	Reports and business matters Arrange as above. But see note after LvAS
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LVAS	Scientific publications Arrange as before. Complete sets and miscellaneous works Single works on a separate subject go under that subject. It is better to put the reports and publications in the same place as the description, e.g. Lv83H [date], Reports of the observatory of Harvard College Lv83H. A-Z Description and history. Lv83HP. Publications.
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## LVB Instruments and observational methods

*See also* Astrophysics—Instruments LWE.

### LVBA Instruments for measuring time

LVBE	Early methods
LVBI	Clepsydra
LVBO	Sun-dials, Gnomonics, Dialling
LVBU	Sciatheric telescope

### LVC Clocks, Chronometers, Horology

LVCA	Astronomical clocks
LVCE	Chronograph
LVCI	Printing chronograph
LVCO	Chronometers, Watches
LVCU	Testing
LVCV	Telegraphic distribution of time

### LVD Instruments for angular measurement

[Whole instruments]

LVDA	Telescope (general)
LVDB	Housing
LVDC	Mounting
LVDD	Altazimuth mounting
LVDE	Illumination
LVDF	Quadrant
LVDG	Mural circle
LVDH	Meridian circle (Transit circle)
LVDI	Transit instrument
LVDJ	Prime vertical instrument
LVDK	Reflecting telescope
LVDL	Refracting telescope
LVDM	Equatorial telescope
LVDN	Equatorial coudé (Sheep-shank telescope)
LVDO	Almucantar
LVDP	Zenith instrument (Zenith sector)
LVDQ	Solar altitude instrument
LVDR	Astrolabe
LVDS	Septant
LVDT	Artificial horizon

### LVE Optical apparatus

LVEC	Lenses Including construction
LVED	Objectives
LVEE	Eye-pieces
LVEN	Testing and adjustment
LVEP	Correcting device

LVER	Reflectors
LVES	Speculæ (Mirrors)
LVET	Mounting
LVF	<b>Measuring apparatus</b>
LVFA	Micrometer
LVFB	Circular
LVFC	Double-image (Prismatic)
LVFD	Square-bar
LVFE	Wire (Filar)
LVFH	Heliometer
LVFI	Position circle
LVFN	Compensating mechanism
LVFO	Siderostat
LVFR	Heliostat
LVFS	Coelostat
LVFU	Graduated circle
LVFV	Vernier
LVFY	Reading microscope
LVG	<b>Accessory apparatus</b>
LVGA	Focusing apparatus
LVGE	Floating collimator
LVGI	Dipleidoscope
LVGO	Oroheliograph
LVGU	Chronodeik
LVGY	Observing chair
LVH	<b>Observational methods</b>
LVHA	Visual
LVHB	Personal equation
LVHD	Photographic (Astro-photography)
LVHE	Photographic telescope
LVHF	Black's
LVHG	Bruce's
LVHH	Draper's
LVHI	Photo-heliograph
LVHL	Photo-transit circle
LVHO	Photo-chronograph
LVHU	Stereocomparator
LVHY	Commutator
LVHYE	Electric
LVHYP	Pneumatic
LVI	<b>Observations (methods)</b>
LVIA	Correction of observations
LVIE	Refraction
LVI	Aberration

LVIO	Parallax
LVIU	Dip of horizon
LVIW	Semi-diameter
LVI'6	Correction tables
Lvj	Impending occurrences
LvjA	Solar Eclipse (Instruction, etc.)
LvjE	Lunar Eclipse (Instruction, etc.)
LvjI	Transits (Instruction, etc.)
LvjO	Opposition, Conjunction
LvjU	Comets
LvjY	Meteoric showers
<b>Lvk</b>	<b>Observatory observations</b>
	Arrange as in Practical astronomy: <i>Observations.</i>
<b>Lvl</b>	<b>Geographical coordinates</b>
lvle	Latitude determination <i>See also</i> Applied astronomy: Geodesy Lx.
lvli	Variation of latitude
lvm	Longitude determination
lvma	Chronometric
lvme	Telegraphic and signal
lvmi	By eclipse
lvmo	By occultation
lvmu	By lunar coördinates
lvmy	By lunar distance
<b>lvn</b>	<b>Spherical coördinates (absolute and relative)</b>
lvna	Sun
lvne	Planets Sub-arrange if necessary as in Lxn.
lvni	Comets Sub-arrange if necessary as in Lxy.
lvno	Meteoric showers
lvnr	Radians
lvnt	Trajectories
lvnu	Meteors, Shooting stars Arrange alphabetically, as Andromids LvnuA, Geminids LvnuG, Leonids LvnuL, Lyrids LvnuM, Orionids LvnuO, Perseids LvnuP.
lvo	Fixed stars
lvp	Star catalogues
lvq	Astrographic charts, star-maps
lvr	Double and multiple stars (measurement, etc.)
lvrb	Binary stars Individual binaries, arranged by name, number, or letter, as: Capella, B 107, κ Pegasi.

LVR <sub>C</sub>	Star clusters
LVR <sub>N</sub>	Nebulæ
Lvs	Transformation of coördinates
LVT	<b>Rotation and figure</b>
Lvts	Sun
Lvty	Planets
	Sub-arrange as in Lx <sub>N</sub>
Lvu	Diameter
Lvus	Sun
Lvuy	Planets
	Sub-arrange as in Lx <sub>N</sub> .
Lvv	<b>Eclipse, Transit, Occultation</b>
Lvva	Eclipses
	Reports, etc.
Lvvi	Sun
Lvvo	Eclipse expeditions
Lvvy	Moon
Lvw	Transits
	Reports, etc
Lvwa	Transit expeditions
Lvwe	Mercury
Lvwi	Venus
Lvwy	Jupiter's satellites
Lvx	Occultations
Lvy	<b>Parallax determination</b>
Lvy <sub>A</sub>	Geometrical method
Lvy <sub>E</sub>	Observational method
Lvy <sub>I</sub>	Physical method
Lvy <sub>O</sub>	Solar parallax
Lvy <sub>U</sub>	Planetary parallax
	Arrange as in Lx <sub>N</sub> .
Lvy <sub>Y</sub>	Stellar parallax
	Individual stars sub-arranged by name, letter, or number
Lvz	<b>Star motion</b>
Lvze	Proper motion
Lvzo	Motion in line of sight (Radial motion, Radial velocity)

## **Lw Astrophysics (Cosmical physics)**

	Miscellaneous
Lwa	Plurality and habitability of worlds
	Theoretical investigations
Lwb	Radiation and temperature of the sun and gaseous bodies

Lwc	Planetary atmosphere Sub-arrange by planets if necessary.
LWD	Stellar densities
LWE	<b>Physical investigations and instruments</b>
LWF	Astrophysical observatories
LWG	Description
LWH	Reports
LW1	Publications (scientific)
Lwj	<b>Photometry, Photometric observations</b>
LWK	Photometric Apparatus
LWL	Photometer
LWLA	Abney's sector
LWLD	Dispersion
LWLM	Meridian
LWLN	Microspectral
LWLP	Photographic
LWLQ	Polarization
LWLS	Spectrophotometer
LWLV	Wedge
LWLW	Wheel
LWM	Bolometer
LWN	Polariscope, Polarizing eye-piece
LWO	Spectroscopic analysis This subject is also treated in Physics
LWP	Spectroscopic apparatus
LWQ	Spectroscope
LWQE	Grating
LWQF	Solar
LWQG	Eclipse
LWQH	Stellar
LWQO	Ocular
LWR	Telespectroscope
Lws	Spectrograph
LWT	Spectroheliograph
Lwu	<b>Actinometry, actinometric observations</b>
Lvv	Actinometric apparatus
Lww	Actinometer
Lwx	Pyrheliometer
Lwy	<b>Photographic observations</b>
Lx	<b>Stellar system, Sidereal system, fixed stars</b>
Lxa	Structure and distribution of stars
Lxb	Physical observations
LxBA	Photometric Arrange individual star observations by number, or number and name, as in star catalogs.

LXBE	Photometric catalogs (Durchmusterung)
LXB1	Spectroscopic Arrange individual observations as above.
LXBO	Stellar spectra As $\beta$ Lyrae, $\delta$ Cephei, Nova Aurigae, etc.
LXBU	Color and temperature
LXBY	Colored-star catalogs <i>See LXIV.</i>
LXC	Visibility
LXD	Incomplex stars Arrange individual star observations by name, or name and number, of the star.
LXE	Multiple stars Individual stars as above.
LXF	Double stars Individual stars as above.
LXFI	Invisible companions
LXG	Binary stars (Binary system) Individual binaries as above.
LXGB	Spectroscopic binaries
LXH	Variable stars
LXHA	Physical observations
LXHE	Theoretical discussions (origin, etc.)
LXHI	Periodic variables
LXHJ	Long-period variables (Omicron Ceti type)
LXHK	Short-period variables (Beta Persei type)
LXHL	Beta Lyræ type
LXHO	Irregular variables, New stars Arrange by name, letter, or number, as: $\tau$ Coronæ, Nova Persei (3.1901)
LXI	Star catalogs (Durchmusterung) General
LXIB	Binary
LXID	Double and multiple stars
LXIV	Variable Colored <i>See LXBY.</i>
LXJ	Ephemerides
LXK	Nebulæ
LXKA	Physical observations
LXKE	Annular nebulae, Ring nebulae
LXKI	Spiral nebulae
LXKL	Diffused nebulae
LXXN	Planetary nebulae
	[Other forms]
LXKU	Catalogs
LXKY	Photographs and drawings
LXL	Star clusters
LXLA	Physical observations
LXLE	Galaxy (Milky Way)

LXLI	Individual clusters
	Arrange under the name of the constellation in which they are situated or by name when they have one as: Pleiades LXLIP, H 1119 Auriga LXLIH.
LXL0	Star cluster variables
LxLU	Catalogs
LxLY	Photographs and drawings
LXLZ	Solar system
LXM	Sun
LXMA	Solar physics
LXMB	Chemical and physical constitution
LXMC	Temperature, Fuel
LXMD	Actinometric observations
LXME	Surface phenomena, Atmosphere
LXMF	Eclipse observations
LXMG	Corona
LXMH	Chromosphere
LXMI	Prominences (Protuberances)
LXMJ	Reversing layer
LXMK	Photosphere
LXML	Sun-spots, Faculae
LXMM	Frequency and heliographic position
LXMN	Sun-spots and magnetic phenomena
LXMO	Sun-spots and weather phenomena
LXMP	Photometric and Spectroscopic observations
LXMQ	Photometric
LXMR	Polarization
LXMS	Spectroscopic, Solar spectra
LXMT	Corona
LXMU	Chromosphere
LXMV	Reversing layer
LXMW	Photosphere
LXMX	Electric and other observations
LXMY	Photographs and drawings
LXN	Planets, Planetary system
LXNA	Constitution
LXNE	Photometric observations General: for individual planets see each name
LXNI	Spectroscopic observations
LXNU	Inner planets
LXNY	Possible intra-Mercurian
LXO	Mercury
LXP	Venus
LxQ	Earth

LxQA	Terrestrial physics
LxQB	Figure (oblation, etc.)
LxQC	Density
LxQD	Nature of the interior
LxQE	Photometric observations
LxQI	Polar light
LxQK	Aurora borealis
LxQL	Aurora australis
LxQM	Magnetic phenomena
LxQN	Spectroscopic observations
LxQO	Atmospheric phenomena
LxQP	Scintillation of the stars
LxQR	Color of the sky
LxQS	Sunset and twilight phenomena
LxQU	Zodiacal light
LxQY	Counter glow (Gegenschien)

## Moon

LxRA	Physical observations (Selenography)
LxRB	Figure and constitution
LxRC	Lunar topography
LxRD	Spots
LxRE	Vulcanism [Other appearances]
LxRG	Illumination, Color
LxRH	Albedo
LxRI	Fulguration
LxRK	Temperature
LxRL	Spectroscopic observations
LxRM	Theoretical discussions
LxRN	Atmosphere
LxRO	Water
LxRP	Snow
LxRR	Cartographic work
LxRU	Photographs and drawings
LxRY	Nomenclature
LxRZ	Feigned discoveries, Hoaxes

## Mars

LxSA	Physical observations (Photometric and Spectroscopic)
LxSB	Figure and constitution
LxSC	Albedo
LxSD	Markings ("Canals")
LxSE	Atmosphere
LxSI	Satellites
LxSO	Phobos
LxSU	Daimos

LXT	Minor planets (Planetoids, "Asteroids")
LXT	Physical observations (photometric and spectroscopic)
	Individual planetoids arranged alphabetically as:—Astraea . LXTA, Ceres Lxrc, Eros (and its variation in light), LXTB, Juno Lxtj, Pallas Lxtp, Tercidina Lxtr, Vesta Lxtv, etc.
LXTZ	Outer planets
LXU	Jupiter
LXUA	Physical observations (Photometric and Spectroscopic)
LXUC	Red spot
LXUI	Satellites Separately; I, Io LXUL, II, Europa LXUN, III, Ganymede LXUP, IV, Callisto LXUR, V, LXUS, VI, LXUT.
LXV	Saturn
LXVA	Physical observations
LXVE	Ring system
LXVF	Pale ring
LXVG	Eccentricity
LXVI	Satellites
LXVL	Mimas
LXVN	Enceladus
LXVO	Tethyo
LXVP	Dione
LXVR	Rhea
LXVT	Titan
LXVU	Hyperion
LXVY	Iapetus
LXVZ	Phoebe
LXW	Uranus
LXWA	Physical observations
LXWE	Markings
LXWI	Satellites
LXWO	Ariel
LXWU	Umbriel
LXWV	Titania
LXWY	Oberon
LXX	Neptune
LXXA	Physical observations
LXXI	Satellite
LXXY	Possible trans-Neptunian planet
LXY	Comets
LXYA	Figure and constitution
LXYE	Physical observations (photo and spectroscopic)

LXYI	Cometary system, Periodic comets
LXY	Individual comets
	Arrange chronologically by year, letter, adding name of observer as: Lxy 1230, Lxy 1305, Lxy 1826 (Bella), Lxy 1858 (Donati), Lxy 1889 (Brooks), Lxy 1902b (Perrine), Lxy 1902c (Griggs).
LXYU	Catalogs
LXYY	Photographs and drawings
LXZ	<b>Meteors, Meteorites, Fire-balls</b>
LXZA	Structure and composition
LXZE	Physical observations
LXZI	Unusual meteoric appearances
LXZO	Meteoric dust (Cosmic dust)
LXZU	Individual meteors
	Arrange chronologically by observation, <i>i.e.</i> , year and day of the month.
LXZY	Meteorites
	These, being meteors that reach the earth, and become observable as hand specimens, may be relegated to Mineralogy if thought desirable.
LXZZ	Catalogs

## **LY Applied astronomy, Geodesy**

### **LY·6 Tables**

LY·62	Conversion tables
LY·64	Correction tables
LY·66	Table of constants
LY·68	Traverse tables

### **LYA Instruments**

Not including instruments for surveys of limited extent.

LYB	Zenith telescope See also Practical Astronomy, Instruments. LYB, etc.
LYC	Theodolite
LYCA	Altazimuth
LYCE	Transit
LYCI	Engineer's
LYCL	Mountain
LYCO	Surveyor's
LYCU	Repeating circle
LYCY	Accessory apparatus
LYD	Heliograph (Helioscope)
LYE	Compass
LYEA	Plain
LYEE	Railroad
LYEI	Vernier
LYEL	Vernier transit
LYEO	Solar

LYEU	Dial
LYEY	Dip
LYF	Tachymeter (Tacheometer)
LYG	Levelling instruments
LYGC	Surveyor's level
LYGG	Gavett level (Dumpy-level)
LYGM	Y-level
LYGR	Levelling rod
LYH	Plane-table
LYHA	Alidade
LYI	Odometer
LYJ	Barometer
LYJA	Aneroid
LYJE	Plain
LYJI	Mountain
LYJO	Mercurial
LYJU	Sympiesometer (Sympiezometer)
LYK	Gravity instruments
LYKA	Pendulum
LYKC	Convertible
LYKE	Defforge's
LYKG	Invariable
LYKI	Repsold's
LYKN	Reversible
LYKO	Gravity meters
LYKU	Barymeter
LYKY	Gravity balance

## Figure of the earth

*See also* Astrophysics—Earth Lxq

LYM	Curvature
LYN	Arc determination
LYNE	Meridian arc
LYO	Gravity experiments
LYOP	Pendulum observations
LYP	Determination of geographical positions
LYQ	Geographical latitude and longitude
LYQT	Particular stations
	Geographical arrangement : with local list
LYR	Base-line measurements
Lys	Triangulation
LYSE	Calculation of triangulation
LYT	Levelling
LYU	Co-ordination of geodetic points
LYV	Geodetic surveys
LYW	Trigonometrical surveys (Ordnance survey, etc.)
LYX	Topographical surveys

Geographical arrangement : with local list. This might be relegated to surveys, in Geography.

Lyy	Hypsometry Altitudes, by countries : with local list. This might be relegated to surveys, in Geography.
Lyz	Barometry
Lz	<b>Nautical astronomy and Navigation*</b>
Lza	Tables
Lzab	Traverse (Latitude and Longitude)
Lzad	Spherical traverse
Lzag	Meridional parts
Lzal	Altitude
Lzan	Azimuth
Lzar	Dip
Lzas	Reduction
Lzat	Correction
Lzav	Tables for great circle sailing Tide. <i>See</i> Tides (Lzz). [And others]
Lzb	Charts
Lzc	Mercator
Lzd	Gnomonic
Lze	Polyconic
Lzf	Coast pilot and sailing directions With the local list.
Lzg	Instruments
Lzh	Lead
Lzhe	Sounding machines
Lzho	Piezometer
Lzi	Log
Lzie	Electric
Lzii	Differential manometric
Lzio	Ground
Lziu	Massey's
Lzj	Log-book
Lzk	Marine odometer
Lzl	Mariner's compass
Lzle	Evoy-patented
Lzlo	Registering
Lzly	Compass-card
Lzm	Azimuth compass
Lzn	Chronometer
Lzne	Double chronometer
Lzo	Quadrant
Lzp	Sextant
Lzq	Octant

\*If this is not kept in Astronomy the title might read:  
Navigation including Nautical Astronomy.

LZR	Artificial horizon For Lzo-LZR see also Practical astronomy, Instruments. (Lvb, etc.)
Lzs	Use of the compass
Lzse	Deviation and rectification
Lzt	Rating chronometers
Lzu	Correction of errors of sextant
Lzv	Position determination
Lzva	Dead reckoning (Account)
Lzve	Pilotage
Lzvi	Cross-bearings
Lzvo	Sounding
Lzw	Observation (Astronomical navigation)
Lzwa	Latitude and Longitude determination
Lzwe	Altitudes
Lzwi	Meridian
Lzwo	Ex-meridian, Circum-meridian
Lzwu	Sun's cross-bearings
Lzwy	Double altitude
Lzwyl	Lalande's method
Lzwyp	Pagel's method
Lzwym	Marcq Saint Hilaire's method
Lzwys	Sumner's method
Lzx	<b>Sailing</b>
Lzxa	Composite
Lzxc	Current
Lzxe	Great circle, Tangent
Lzxi	Mercator
Lzxn	Middle latitude
Lzxo	Oblique
Lzxp	Parallel
Lzxu	Plane
Lzvx	Traverse
Lzxy	Windward
Lzy	<b>Winds and currents</b>
Lzz	<b>Tides</b>
	For the theory of tides see Celestial mechanics—Gravitation. (Lui).
Lzze	Tide tables, Tidal constants





B. *Indices*

# Natural History

- M·1 Theory. Philosophy
- M·2 Bibliography
- M·3 Biography
- M·4 History
- M·5 Dictionaries. Encyclopedias
- M·6 Yearbooks. Directories
- M·7 Periodicals
- M·8 Societies
- M·9 Collections

**M** General and miscellaneous works

**MA** Classification. Nomenclature

**MAE** Museums

With local list. For geological and other special museums, see the subjects.

**MAF** Construction

**MAG** Appliances

**MAH** Museum technique

MAI      Collecting and preserving

Subdivide, if necessary, as in OAB, OAC

## MAN Aquaria

With local list, if needed

## MAR Geographical distribution (i.e: of plants and animals)

General works only. *See also* NH, OGA

## MAS Scientific expeditions (narratives)

With local list.

MAT      Publications (results)

Natural history of the Bible *See* NBEN

# MICROSCOPY

Classification made by Mr. Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

## SYNOPSIS

Microscopical technique MBC

Micrography MBF

Microbiology MBG

Microbotany MBH

Microzoology MBI, MBJ

Technical and Economic Microscopy MBK

Nomological (Legal) Microscopy MBL

Medical Microscopy MBM

Bacteriology MBN

Laboratories MBP

Morphology MBQ

Physiology MBR

Special bacteriology MBS

**M<sub>B</sub>'1** Teaching

**M<sub>B</sub>'2** Bibliography

**M<sub>B</sub>'3** Biography

**M<sub>B</sub>'4** History

**M<sub>B</sub>'5** Dictionaries

**M<sub>B</sub>'6** Tables

**M<sub>B</sub>'7** Periodicals

**M<sub>B</sub>'8** Societies

**M<sub>B</sub>'9** Collections

## **M<sub>B</sub>** Comprehensive and miscellaneous works

## **M<sub>BA</sub>** Museums

With local list

## **M<sub>BB</sub>** Laboratories

With local list, if needed

## **M<sub>BC</sub>** Microscopical technique *See also* OΛM

**M<sub>BD</sub>** Microscopes

**M<sub>BDP</sub>** Appliances and parts

**M<sub>BDO</sub>** Stands

**M<sub>BDU</sub>** Optical apparatus. Lenses

**M<sub>BDW</sub>** Polarizing apparatus

**M<sub>BDY</sub>** Photographing apparatus. Photomicroscope

*See also* M<sub>BEW</sub>

**M<sub>BE</sub>** Preparation

M <sub>BEA</sub>	Section cutting. Microtomy
M <sub>BEAI</sub>	Imbedding
M <sub>BEB</sub>	Microtome
M <sub>BEF</sub>	Fixing. Hardening, etc
M <sub>BEG</sub>	Preserving media
M <sub>BEH</sub>	Stains and staining
M <sub>BEK</sub>	Other operations
M <sub>BEKD</sub>	Decalcification. Softening
<b>M<sub>BEM</sub></b>	Mounting
M <sub>BEN</sub>	Cells
M <sub>BEO</sub>	Slides
M <sub>BEP</sub>	Cements. Varnishes
M <sub>BER</sub>	Special treatment for particular substances
M <sub>BERD</sub>	Deposits
M <sub>BERS</sub>	Suspended matter
M <sub>BES</sub>	Methods for study of sections
M <sub>BET</sub>	Drawing
M <sub>BEU</sub>	Modeling
M <sub>BEV</sub>	Micrometer
M <sub>BEW</sub>	Photomicrography
M <sub>BEZ</sub>	Dealers' catalogues

**M<sub>BF</sub> Micrography. Descriptive microscopy**

In all libraries, except microscopical ones, it will be best to use this division for general works, and to put the books relating to its subdivisions with the subjects (Botany, Zoology, Medicine, etc.,) to which they refer.

MBFA	<i>Inorganic</i>
MBFC	Microchemistry Better in Chemistry
MBFE	Micromineralogy Better in MDKM
MBFH	Microcrystallography Better in MEX
MBFJ	Micropetrology Better in MFM
MBFM	Microgeology (Economic) Alphabetical sub-arrangement <i>See also</i> MGY
MBFMC	Carbon (Coal)
MBFMI	Iron
MBFP	Micropalaeontology Better in MGPM
MBFO	Palaeobotany
MBFT	Palaeozoology
MBFZ	<i>Organic</i>
MBG	Microbiology Better in Biology
MBGC	Cell
MBGD	Protoplasm
MBGF	Nucleus. Nucleolus
MBGH	Vacuole
MBGJ	Cell-wall
MBH	Microbotany
MBHA	Histology Cell <i>See</i> MBGC
MBHC	Tissue
MBHCA	Parenchyma
MBHCE	Prosenchyma
MBHCI	Embryonic (Meristem)
MBHCT	Tissue systems
MBHD	Morphology Sub-arrangement as in ND

MBHDC	Root
MBHDG	Stem
MBHDL	Leaf
MBHDP	Flower
MBHDR	Reproductive organs
MBHDX	Seed. Fruit
MBHE	Physiology Sub-arrangement (if necessary) as in NE
MBHH	Systematic botany Sub-arrangement as in NJ
,	
MBHI	Protophyta
MBHIA	Schizophyta
MBHIB	<i>Bacteria</i> See also MBN
MBHID	Myxomycetes
MBHIF	Flagellatae
MBHIH	Silicoflagellatae
MBHIK	Peridineae
MBHIP	Diatomeae <i>Diatoms</i>
MBHIS	Conjugatae <i>Desmids</i>
MBHIV	Heterocontae <i>Conforvae</i>
MBHJ	<i>Cryptogamia</i>
MBHK	Thallophyta
MBHL	Algae <i>Sea-weeds</i>
MBHM	Fungi <i>Mushrooms</i>
MBHN	Lichenes <i>Lichens</i>
MBHO	Bryophyta
MBHP	Hepaticae <i>Liverworts</i>
MBHQ	Muscae <i>Mosses</i>
MBHR	Pteridophyta <i>Ferns</i>

MBHS	Cycadofilices
MBHT	Spermatophyta (Phanerogamia)
MBHU	Gymnospermae
MBHV	Angiospermae
MBHW	Particular classes of plants
MBHX	Parasitic
MBHZ	Poisonous
MBI	Microzoology Sub-arrangement as in Ob—Od
MBIA	Morphology
MBIAB	Protoplasmic structure <i>See also</i> Biology
MBIB	Multicellular structure
MBIC	Myography
MBID	Supporting and defensive structures
MBIE	Splanchnology
MBIEA	Alimentary system
MBIEL	Vascular system
MBIER	Respiratory system
MBIEU	Excretory system
MBIF	Nervous system
MBIG	Urino-genital system
MBIH	Histology (Tissues)
	Cell <i>See</i> Biology
MBII	Tegumentary
MBIJ	Specialized
MBIK	Connective
MBIL	Osseous
MBIM	Muscular
MBIN	Nervous
MBIO	Vascular





MBIOL	Liquid
MBIOM	Chyle
MBIOR	Lymph
MBIP	Blood
MBIQ	Reproductive
MBIR	Physiology
MBIS	Cellular
MBIT	Alimentary system
MBIU	Vascular
MBIW	Secretory (Glandular)
MBIV	Reproductive
MBIZ	Physiological chemistry
	Sub-arrangement as in Oco
MBJ	Systematic zoology
MBJA	<i>Invertebrata</i>
MBJB	Protozoa
MBJC	Porifera
MBJD	Coelenterata
MBJE	Echinodermata
MBJF	Platyhelminia
MBJFH	Nemertea
MBJFN	Nematelia
MBJFT	Trochelminia (Rotifera, etc.)
MBJG	Mollusca
MBJH	Annelida
MBJHK	Polyzoa
MBJHR	Brachiopoda
MBJHW	Chaetognatha
MBJI	Arthropoda

MBJJ	Myriapoda
MBJK	Arachnida
MBJL	Crustacea
MBJM	Chilopoda
MBJN	Hexapoda <i>Insects</i>
MBJP	Parsites <i>See also</i> MBMP
MBJO	Chordata
MBQH	Hemichordata
MBJR	Protochordata
MBJS	Vertebrata
MBJT	Cyclostomata
MBJU	Ostracodermi
MBJV	Pisces
MBJW	Amphibia
MBJX	Reptilia
MBJY	Aves
MBJZ	Mammalia

## MBK Technological and Economic microscop

MBKA	Mining
MBKB	Metallurgy
MBKC	Agriculture
MBKD	Soils
MBKE	Fertilizers
MBKF	Soil products.   Crops
MBKG	Dairy products. <i>See also</i> MBUN
MBKH	Horticulture
MBKHA	Vegetables
MBKHF	Fruits

MBKHL	Flowers
	Pests. <i>See</i> MBV
MBKHR	Forestry
MBKI	Animal culture
MBKJ	Domestic economy
MBKK	Foods. <i>See also</i> MBUL
MBKL	Beverages. <i>See also</i> MBUP
MBKM	Chemical technology Sub-arrangement as in Rz or in T
MBKN	Constructive arts Sub-arrangement as in Sc, Sd
MBKO	Sanitation Sub-arrangement as in SJ
MBKP	Drinking water. <i>See also</i> MBUD
MBKQ	Sewage
MBKR	Manufactures
MBKRA	Raw material
MBKRE	Vegetable fiber
MBKRI	Animal fiber
MBKRO	Mineral fiber
MBKS	Manufactured product
MBKSL	Leather
MBKSP	Paper
MBKT	Textile fabrics Alphabetical sub-arrangement
MBKW	Mechanic trades
NBKZ	Fine arts
MBKZP	Pigments. Better in MBKM
<b>MBL</b>	<b>Nomological (legal) microscopy</b>

<b>M<sub>BLA</sub></b>	Personal characteristics
<b>M<sub>BLE</sub></b>	Skin
<b>M<sub>BLF</sub></b>	Finger-marks
<b>M<sub>B,LH</sub></b>	Hair
<b>M<sub>BLJ</sub></b>	Clothing
<b>M<sub>BLK</sub></b>	Blood-stains. <i>See also</i> MBIP
<b>M<sub>BLM</sub></b>	<i>Other</i>
<b>M<sub>BLN</sub></b>	Handwriting. Ink
<b>M<sub>BLP</sub></b>	Falsifications. Forgeries
<b>M<sub>BLR</sub></b>	Counterfeiting
<b>M<sub>BLS</sub></b>	Medical jurisprudence
<b>M<sub>BLT</sub></b>	Toxicology
<b>M<sub>BLU</sub></b>	Sexual crime

## **MBM Medical microscopy**

Better in OCF

<b>M<sub>BMA</sub></b>	Anatomy
<b>M<sub>BMC</sub></b>	Physiology
<b>M<sub>BMF</sub></b>	Pharmacy. Drugs. Medicines
<b>M<sub>BMG</sub></b>	Therapeutics
<b>M<sub>BMI</sub></b>	Pathology (Diseases)
<b>M<sub>BMK</sub></b>	Blood. <i>See also</i> MBIP
<b>M<sub>BML</sub></b>	Sputum
<b>M<sub>BMM</sub></b>	Particular regions
	Germ theory. <i>See</i> QCH
	Bacteriology. <i>See</i> MBN
<b>M<sub>BMN</sub></b>	Particular diseases. Books generally will go in MBX If necessary sub-divide as in QF—QO.
<b>M<sub>BMP</sub></b>	Parasitic protozoa. <i>See also</i> QFZ

<b>M<b>BMQ</b></b>	<b>Hosts</b>
<b>M<b>BMS</b></b>	Pathogenic protozoa. Sub-arranged alphabetically
<b>M<b>MSC</b></b>	Ciliata
<b>M<b>MS</b></b>	Sporozoa
<b>M<b>BMT</b></b>	Diseases caused by protozoa
<b>M<b>BU</b></b>	Malaria
<b>M<b>BMV</b></b>	Piroplasmosis
<b>M<b>BW</b></b>	Trypanosomiasis. (Sleeping sickness)
<b>M<b>BMX</b></b>	<i>Other</i>

## **MBN Bacteriology** *See also NNB, QCG, QGAB, QHD*

<b>M<b>BN</b>7</b>	Periodicals
<b>M<b>BN</b>8</b>	Societies
<b>M<b>BN</b>9</b>	Collections
<b>M<b>BNC</b></b>	Classification. Nomenclature
<b>M<b>BP</b></b>	Laboratories. With local list.
<b>M<b>BPA</b></b>	Methods of culture, etc.
<b>M<b>BPB</b></b>	Isolation
<b>M<b>BPE</b></b>	Sterilization
<b>M<b>BPK</b></b>	Bio-chemical methods
<b>M<b>BPR</b></b>	Apparatus and instruments Microscope technique. <i>See</i> MBG
<b>M<b>BQ</b></b>	Morphology. <i>See also</i> NNB
<b>M<b>BQA</b></b>	Form and structure. <i>See also</i> MBT
<b>M<b>BQB</b></b>	Globular (Micrococci)
<b>M<b>BQC</b></b>	Rod-like (Bacilli)
<b>M<b>BQD</b></b>	Thread-like
<b>M<b>BQE</b></b>	Spiral (Spirillae)

MBQH	Merismopedium
MBQI	Sarcina
MBQK	Saprophytic
MBQN	Parasitic
MBQP	Pathogenic. <i>See also</i> MBX
MBQPS	Spirochaete
MBQV	Spores
MBR	Physiology. Biology, etc.
MBRA	Cultural character
MBRB	Vitality
MBRD	Nutrition. Growth
MBRE	Propagation. Reproduction
MBRG	Movement
MBRI	Oekology
MBRIA	Action of chemical reagents
MBRIC	Action of nitrogenous substances. <i>See also</i> MBRP
MBRID	Aerobism Anaerobism
MBRIF	Relation to light
MBRIH	Phosphorescent bacteria
MBRIM	Relation to heat
MBRIN	Thermophilous bacteria
MBRIS	Symbiosis
MBRIV	Antagonism
MBRK	Enzymes. Fermentation
MBRL	Putrefaction
MBRO	Oxidation
MBRP	Nitrification. Denitrification. <i>See also</i> MBRIC
MBRS	Products of metabolism
MBRT	Toxius and antitoxins

MBS	Special bacteriology
MBT	Bacteria of inorganic substances
MBTI	Iron bacteria
MBTN	Nitrogen bacteria. Holophytic bacteria.
MBTS	Sulphur bacteria (Thiobacteria) <i>See also</i> MBRP
MBU	Relation to non-living substances. <i>See also</i> MBV
MBUA	Air
MBUD	Water. "Water bacteriology"
MBUE	Ice
MBUG	Soils
MBUK	Aliments
MBUL	Food
MBUN	Dairy products
MBUP	Beverages
MBUPB	Beer. Brewing
MBUR	* <i>Other</i>
MBV	Bacteria of hygiene and sanitation. <i>See also</i> MBU
MBVA	Dwellings
MBVE	Sewage
MBVI	Refuse material
MBVN	Clothing
MBW	Relation to the animal kingdom
MBWA	Bacteria of particular organs Sub-divide as in Q.A, if necessary
MBWF	Saprophytic micro-organisms
MBWG	Non-pathogenic organisms
MBWH	Pathogenic organisms
MBWI	Immunity. Immunization
MBWL	Leucocytosis

M BWP	Serum reaction
M BWS	Bacteriolysis
M BWV	Disinfection. Antiseptics
	Bacteria of Pharmacy. <i>See</i> MBMF
MBX	Bacteria of disease. Sub-divide as in QF-QO. <i>See also</i> MBMI
MBY	Micro-organisms in relation to plants
MBYB	Bacteriosis
MBYD	Grasses and cereals
MBYG	Vegetables
MBYK	Trees and shrubs
MBYN	Fruits
MBYP	Particular classes of plants For sub-divisions follow the arrangement in NN-NZ
MBYR	Micro-organic diseases of animals
MBYS	Animals and man. Alphabetical sub-arrangement.
MBYSA	Anthrax
MBYSG	Glanders
MBYSR	Rabies
MBYT	Animals alone Alphabetical sub-arrangement
MBYU	Particular classes of animals Sub-arrange alphabetically by the name of the animal, or by classes as in OG-PT. The former is preferable.

## MBZ Cosmical Physics

**Astrophysics** *See* LW

# MC Meteorology (Aerology)

- Mc·1 Study and teaching
- Mc·2 Bibliography of Meteorology
- Mc·3 Biography of Meteorologists
- Mc·4 History
- Mc·5 Dictionaries
- Mc·6 Tables. Handbooks

Special tables will go with the subjects to which they refer.

- Mc·7 Periodicals
- Mc·8 Societies
- Mc·9 Collections

## MCA Nomenclature. Classification

*See also MCIIK, MCCLI*

## MCB Cosmical meteorology

## MCD Dynamic meteorology. Physics of the atmosphere

- MCDA Thermodynamics of the air
- MCDG Graphic analysis
- MCDK Air mixtures
- MCDN Conductivity
- MCDE Special phenomena

MCEA	Atmospheric vortices <i>See also</i> LIZFV
MCED	Radioactivity
MCEI	Ionization. Nucleation. Condensation nuclei. <i>See also</i> LMFI
MCEK	Atmospheric dust
MCEM	Volcanic ash. Smoke
MCEP	"Dark day." "Yellow day," etc.
MCES	Showers of "blood," "sulphur", etc.
MCET	Red snow
MCEV	Composition of the air
MCEY	Height of the atmosphere
McF	Investigations of the upper air
McFA	Kites and balloons
	Optical phenomena. <i>See</i> MCN
McFI	Temperature and radiation
McFK	Diurnal and nocturnal variations
McFM	Measurement and distribution of temperature. <i>See also</i> MCQ
McFN	Thermometry
McFT	Isotherms. Thermometric charts
McFU	Terrestrial radiation
McFV	Black-bulb thermometer
MCH	Pressure and circulation
McHA	Distribution of pressure. Diurnal changes
McHC	Measurement of pressure. Barometry
McHD	Apparatus
McHK	Correction and reduction
McHM	Isobars. Barometric charts
McHN	Circulation
McHP	Ferrel's theory

MCHR	Other theories and investigations
Alphabetically sub-arrangement, as:	
MCHRH	Helmholtz
MCHRS	Siemens
MCHW	Friction of the currents. "Internal work" <i>See also LIZFI</i>
McI	Winds and storms
McIA	Theories
McIAC	Convectional
McIC	Effects of the earth's rotation
McIF	Measurement of velocity. Anemometry
McIG	Apparatus
McIH	Diurnal and annual variations
McIJ	Wind tables. Diagrams. Windrose
McIK	Classification of winds
McIKA	Planetary
McIKE	Trade-winds. Doldrums
McIKM	Monsoons
McIM	Wind storms. Hurricanes
McIN	Cyclonic storms
McINA	Tropical
McINE	Extra-Tropical
McIP	Cyclonic and anticyclonic winds
McIQ	Warm wave. Sirocco
McIQF	Foehn. Chinook
McIR	Cold wave. Blizzard
McIRB	Bora. Mistral
McIT	Anticyclonic calm
McIU	Local storms
McIV	Thunder storms. <i>See also LMTP</i>

MCIW	Tornadoes. Waterspouts
MCK	Atmospheric moisture
MCKA	Humidity
MCKD	Vertical distribution of vapor
MCKM	Measurement. Local distribution. With local list
MCKN	Atmometry (Atmidometry)
MCKP	Hygrometry
MCKPH	Hygrometer
MCKS	Psychrometry
MCKSP	Psychrometer
MCL	Condensation and precipitation
MCLA	Dew. Dew point
MCLC	Frost
MCLF	Fog. Fog-breakers
MCLH	Clouds
MCLI	Classification
MCLJ	Altitude
MCLM	Measurement
MCLMS	Sunshine records
MCLP	Precipitation. Rainfall. Snow
MCLPA	Relation to atmospheric circulation
MCLQ	Distribution of rain and snow. With local list
MCLR	Measurement. With local list
MCLRG	Rain gauge
MCLS	Snow. Hail
MCLU	Artificial production of rain
MCLV	Drought

Mcm	Atmospheric electricity. <i>See also LMT</i>
	Thunder storms. <i>See MCIV</i>
MCMG	Globular lightning
MCMK	St. Elmo's fire
MCMP	Aurora borealis. <i>Better in LXOI.</i> <i>See also LNLP</i>
MCMZ	Ozone
MCN	Meteorological optics
MCNA	Refraction phenomena
MCNC	Color of the sky
MCND	Sunrise, sunset and twilight phenomena
MCNE	Red sunsets
MCNH	Rainbows. Fog bows, etc
MCNK	Coronae. Halos. Parhelia
MCNL	Luminous clouds
MCNP	Mirage. Fata Morgana
MCNT	Brocken spectre
MCP	Synoptic meteorology
MCPA	Alteration of pressure
MCPL	Meteorological limit
MCQ	Practical meteorology. Weather
MCQA	Methods of observation. Computation
MCR	Meteorological observatories. With local list
Mcs	Publications
Mct	Mountain observatories. With local list
Mcu	Local weather phenomena. Observations. Forecasts
Mcv	Weather bureaus. With local list
Mcw	Storm signals. Weather warnings
Mcwc	Cold wave warnings

McWM	Weather maps
McWU	Application to agriculture and commerce
McWY	Weather lore and proverbs
McX	Meteorological apparatus Such apparatus as is not included under the particular heads will go here.
McXZ	Dealers' catalogues
McY	Climatology. Climate
MCYA	Periodic variations
MCYD	Secular variation Geological climates. <i>See</i> MGKX
MCYH	Effects of topography and local conditions
MCYI	Influence of the ocean
MCYL	Local control
MCYP	Relation to vegetation
MCYT	Relation to animals and man. <i>See also</i> OEXP
Mcz	Climatic distribution. With local list

## MD Mineralogy

Classification made by Mr. Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

MD '4 History

MD '5 Dictionaries

MD '6 Tables. Handbooks

MD '7 Periodicals

MD '8 Societies

MD '9 Collections

## MDA Museums. Cabinets

With local list

## MDB Determinative mineralogy

### MDC Laboratories

With local list

MDCA Apparatus

MDCM Laboratory manuals

MDD Publications

### MDE Analysis. Determination

MDEA Physical

MDEK Chemical

MDEL Blowpipe

MDEP Wet way

## MDF Chemical mineralogy

MDFE Isomerism

MDFI Isomorphism

MDFL Pleomorphism (Dimorphism, Isodimorphism)

MDFP Pseudomorphism. *See also* MFIP

Chemical examination. *See* MDEK

## MDG Physical mineralogy

MDH Optical characters

MDHA Color. Pleochroism

MDHE	Luster. Schiller
MDHI	Asterism
MDHK	Fluorescence. Phosphorescence
MDHM	Effects of heat
MDHO	Optical anomalies
MDI	Thermal characters
MDIC	Conductivity
MDID	Diathermacy
	Electrical and magnetic characters. <i>See</i> MEU

## Crystallography. *See* ME

## MBK Descriptive mineralogy

MDKC	Classification. Nomenclature
MDKM	Micromineralogy
MDKZ	Dealers' catalogues
MDL	Particular groups of minerals (or individual minerals)
	Except in special libraries descriptive works on particular minerals had better be put here, and arranged alphabetically under the name of the mineral.
MDM	Native elements. Alphabetical sub-arrangement as:
	Diamond. <i>See</i> MDW
MDMG	Gold
MDMI	Iron. <i>See also</i> MDT
MDMS	Silver
MDN	Sulphids. Selenids. Tellurids. Arsenids. Antimonids
MDNA	Of the semi-metals
MDNM	Of the metals

M DNS	Sulpho-salts
M DO	Haloids
M DOA	Anhydrous chlorids. Bromids. Iodids. Fluorids
M DOH	Oxychlorids. Oxyfluorids
M DOP	Hydrous chlorids and fluorids
M DP	Oxids
M DPA	Silicon
M DPI	Semi-metals
M DPM	Metals
M DQ	Oxygen salts
M DQA	Carbonates
M DQE	Silicates
M DQJ	Phosphates. Arseniates. Vanadates. Antimonates
M DQN	Nitrates
M DQP	Borates
M DQR	Uranates.
M DQS	Sulphates. Chromates. Tellurates
M DQW	Tungstates. Molybdates
M DR	Salts of organic acids
M DRA	Oxalates
M DRM	Mellates
M DS	Hydrocarbon compounds
M DSA	Simple
M DSD	Oxygenated
M DSH	Petroleum
M DSK	Asphaltum
M DSM	Mineral coal. <i>See also</i> MF SR
M DSN	Anthracite
M DSP	Bituminous
M DSR	Lignite

MDT	Meteorites. Meteoric iron
MDTA	Structure
MDTI	Alloys and intrusions
MDU	Local distribution. With local list
MDV	Precious stones
MDW	Diamond
MDX	<i>Others</i>

**MDY** Synthetic mineralogy. *See also MEP*

**MDZ** Geographical distribution

With local list

## ME Crystallography

Classification made by Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

- 5 Dictionaries
- 6 Tables. Handbooks
- 7 Periodicals
- 8 Societies
- 9 Collections

**MEA** Mathematical and geometrical

**MEB** Calculation and drawing (Crystallometry)

**MEC** Miscellaneous

**MED** Determination

**MEG** Goniometric measurements

MEE.6	Tables of angles
MEF	Optical methods. <i>See also</i> MET
MEG	Drawing. Projection. (Axonometry)
MEGA	Axonometric designation
MEGS	Stereographic method
MEH	Classification. Nomenclature
MEI	Laws of symmetry. Groups
MEIP	Pseudosymmetry
MEK	Crystal systems
MEKA	Isometric
MEKE	Tetragonal
MEKH	Hexagonal
MEKI	Hexagonal
MEKJ	Trigonal (Rhombohedral)
MEKO	Orthorhombic
MEKR	Monoclinic
MEKT	Triclinic
MEM	Morphological (Structure and growth)
MEMB	Theories of structure. Molecular constitution
MEME	Twinning. Compound crystals
	Pseudomorphs <i>See</i> MDFP, MFIP
MEMI	Irregularities
MEMJ	Variations
MEMK	Imperfections. Inclusions
MEMN	Crystalline aggregates
MEN	Growth
MEP	Artificial production <i>See also</i> MDV
MER	Chemical
MES	Physical

MESC	Cohesion. Cleavage
MESH	Hardness
MESK	Etching-figures
MESN	Gliding planes
MESR	Elasticity .
MET	Optical crystallography <i>See also</i> MEF
META	Absorption
METD	Refraction. Birefringence
METE	Refractive indices
METH	Polarization
	Fluid crystals <i>See</i> LISFC
MEU	Electrical phenomena
MEUA	Pyro-electrical <i>See also</i> LMEF
MEUK	Piezo-electrical <i>See also</i> LMFP
MEV	Magnetic properties
MEX	Micro-crystallography

## MF Petrography

### (Petrology. Lithology)

Classification made by Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

.5 Dictionaries

.6 Handbooks. Tables

.7 Periodicals

.8 Societies

.9 Collections

# MFA Museums. Cabinets

With local list

## MFB Classification. Nomenclature

### MFC Determination of rocks

MFCA	Apparatus
MFCH	Technique
MFCK	Chemical
MFCM	Microscopic

### MFD Laboratories

With local list

## MFE Petrogenesis. (Origin and formation)

MFF	Rock-forming minerals
MFG	Molten-magmas
MFH	Internal alteration
MFHA	Oxidation and deoxidation
MFHE	Solution. Decomposition
MFI	Reconstruction
MFIC	Cavity-filling. (Agate structure. Geodes)
MFIF	Fissure-filling Veins. Dykes
MFIL	Concretions
MFIP	Pseudomorphs. <i>See also</i> MDFP
MFJ	Effects of pressure and heat
MFJA	Slaty structure
MFJB	“Newport conglomerate”

M <sub>F</sub> JF	Foliation. Schistosity
M <sub>F</sub> K	Metamorphism
M <sub>F</sub> KA	Local. Contact metamorphism
M <sub>F</sub> KC	Regional. General (Normal) metamorphism
M <sub>F</sub> KD	Dynamical (Rosenbusch)
M <sub>F</sub> KG	Statical (Judd)
M <sub>F</sub> KK	Crystallinic (Dana)
M <sub>F</sub> KL	Paramorphic (Dana)
M <sub>F</sub> KM	Metachemic (Dana)
M <sub>F</sub> L	Chemical geology
M <sub>F</sub> LM	Metosomatosis

## MFM Micropetrology

### MFN Descriptive petrography

For small libraries an alphabetical arrangement of individual rocks, without subdivision — or at the most with the subdivisions M<sub>F</sub>P, M<sub>F</sub>Q, M<sub>F</sub>R — will be best.

M <sub>F</sub> P	Igneous (Eruptive. Massive) rocks
M <sub>F</sub> PA	Pyroclastic
	Individual rocks to be arranged alphabetically under their appropriate subdivisions as follows:
M <sub>F</sub> PAB	Breccia
M <sub>F</sub> PAP	Pumica
M <sub>F</sub> PAT	Tuff
M <sub>F</sub> PC	Glassy rocks. Lava <i>See also</i> M <sub>H</sub> CL
M <sub>F</sub> PCC	Crystalline. Microlite
M <sub>F</sub> PCF	Felsite
M <sub>F</sub> PCR	Rhyolite
M <sub>F</sub> PE	Porphyry <i>See also</i> M <sub>F</sub> PG, M <sub>F</sub> PJ

<b>MFP<sub>E</sub>L</b>	Leucophyre (Felsite porphyry)
<b>MFP<sub>E</sub>M</b>	Melaphyre (Basalt porphyry)
<b>MFP<sub>G</sub></b>	Granite family
<b>MFP<sub>G</sub>G</b>	Granite
<b>MFP<sub>G</sub>Q</b>	Quartz porphyry
	Rhyolite family <i>See</i> MFP <sub>C</sub> R
<b>MFP<sub>J</sub></b>	Syenite family
<b>MFP<sub>J</sub>P</b>	Porphyrite
<b>MFP<sub>J</sub>S</b>	Syenite
<b>MFP<sub>J</sub>T</b>	Syenite porphyry
<b>MFP<sub>L</sub></b>	Elaeolite-Syenite family
<b>MFP<sub>L</sub>E</b>	Elaeolite-syenite
<b>MFP<sub>L</sub>M</b>	Malignite
<b>MFP<sub>N</sub></b>	Diorite family
<b>MFP<sub>N</sub>A</b>	Apatite
<b>MFP<sub>N</sub>D</b>	Diorite
<b>MFP<sub>N</sub>P</b>	Porphyrite
<b>MFP<sub>Q</sub></b>	Trachyte family
<b>MFP<sub>Q</sub>P</b>	Phonolite
<b>MFP<sub>Q</sub>T</b>	Trachyte
<b>MFP<sub>R</sub></b>	Andesite family
<b>MFP<sub>R</sub>D</b>	Dacite (Quartz-andesite)
<b>MFP<sub>R</sub>P</b>	Prophylite
<b>MFP<sub>T</sub></b>	Gabbro-Basalt group
<b>MFP<sub>T</sub>B</b>	Basalt
<b>MFP<sub>T</sub>D</b>	Diabase
<b>MFP<sub>T</sub>E</b>	Dolerite
<b>MFP<sub>T</sub>G</b>	Gabbro
<b>MFP<sub>V</sub></b>	Limburgite group

MFPVA	Augite
MFPVL	Limburgite
MFPX	Peridotite group
MFPXP	Peridotite
MFPXS	Serpentine
MFQ	Schistose (Metamorphic) rocks
MFQA	Argillites. Argillaceous schist
MFQC	Clayslate
MFQE	Quartz schist
MFQG	Quartzite (Quartz rock)
MFQI	Schistose conglomerate
MFQK	Graphite schist
	Crystalline limestone <i>See</i> MFTL
MFQM	Augite schist
MFQN	Greenstone schist
MFQP	Amphibolite schist
MFQR	Talc schist
MFQT	Mica schist
MFQU	Gneiss
MFR	Sedimentary rocks
MFS	Clastic (Fragmental)
MFSA	Gravel and sand rocks
MFSB	Breccia
MFSC	Conglomerate <i>See also</i> MFJB
MFSD	Sandstone
MFSH	Clay rocks
MFSI	Clay slate
MFSJ	Shale
MFSL	Till (Boulder clay)

MFSR	Coal. <i>See also</i> MDSM
MFST	Graphite
	Limestone. <i>See</i> MFTL
	Flint. Chert. <i>See</i> MFTT
MFT	Crystalline (incl. Chemical precipitates)
MFTD	Dolomite
MFTG	Gypsum
MFTI	Ironstone. <i>See also</i> MFU
MFTIH	Haematite
MFTIM	Magnetite
MFTL	Limestone
MFTM	Marble
MFTO	Oolite
MFTQ	Travertine
MFTS	Rock salt
MFTT	Flint. Chert
MFTV	Geyserite (Silicious sinter)
MFU	Ore deposits. <i>See also</i> RFA
MFUA	Genesis
MFV	Description Sub-arranged alphabetically by the name of the ore.
MFW	Local distribution With local list. <i>See also</i> RF
	Meteorites. <i>See</i> MDT

## MFY Local distribution of rocks

With local list.

# GEOLOGY

Classification made by Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

## SYNOPSIS

Cosmical geology MGA

Geognosy MGZ

Dynamical geology MH

Physiography MI

Petrographic geology See MF

Structural (Tectonic) geology MJ

Historical (Stratigraphic) geology MK

Stratigraphy ML, MM

Topographic geology MN

Geological surveys MO

Geological maps MP

Palaeontology MQ

Local Palaeontology MR

Local stratigraphic Palaeontology MS

Palaeobotany MT

Palaeozoology MU

Economic geology MUV

- 2 Study. Teaching
- 3 Biography
- 4 History
- 5 Dictionaries
- 6 Handbooks. Year-books. Charts.

For maps see MP

- 7 Periodicals
- 8 Societies
- 9 Collections

## MG General works

### MGA Cosmical geology

MGF Form and size of the earth.

*See also LXQB*

MGM Movements

*Better in LTJC or LUP*

MGP Cosmogony

MGS Geology and scripture

MGT Days of creation

MGU Deluge

### MGZ Geognosy (Dynamic and Physiographic)

General works only.

## MH Dynamical geology

M <sub>H</sub> A	Internal heat
M <sub>H</sub> AE	Temperature in excavations
M <sub>H</sub> AI	Condition of the earth's interior
M <sub>H</sub> B	Hypogene (Igneous) action. <i>See also</i> MJU
M <sub>H</sub> C	Volcanoes. Volcanic action Includes earthquakes when both are treated of in the same book.
M <sub>H</sub> CA	Structure
M <sub>H</sub> CD	Submarine volcanoes. Volcanic islands
M <sub>H</sub> CF	Fissural eruptions
M <sub>H</sub> CK	Volcanic products
M <sub>H</sub> CL	Lava
M <sub>H</sub> CN	Gases
M <sub>H</sub> CR	Mud volcanoes
M <sub>H</sub> CT	Local distribution With local list
M <sub>H</sub> D	Observatories With local list
M <sub>H</sub> DM	Publications
M <sub>H</sub> E	Geysers. Hot springs
M <sub>H</sub> F	Earthquakes. <i>See also</i> MJM
M <sub>H</sub> G	Earthquake phenomena
M <sub>H</sub> GA	Amplitude of vibration
M <sub>H</sub> GB	Propagation
M <sub>H</sub> GI	Earthquake waves. "Tidal waves"
M <sub>H</sub> GN	Distant earthquake shocks
M <sub>H</sub> GS	Seismic vertical
M <sub>H</sub> GT	Microseismic unrest

MHG <small>V</small>	Local distribution With local list
MHH	Observatories
MHHA	Instruments and apparatus Alphabetical sub-arrangement
MHHM	Publications
MHI	Epigene geology. Surface geology
MHJ	Atmosphere
MHJA	Mechanical action
MHJD	Loess
MHJH	Sand. Blown sand. Dunes
MHJI	Sand erosion
MHJM	Chemical action
MHJO	Oxidation
MHJT	Temperature effects
MHJW	Effects of electricity
MHK	Water
MHL	Rain
MHLA	Corrosion (Abrasion and solution)
MHLE	Transportation
MHLI	Soil formation
MHLO	Movement of soil-cap
MHM	Underground waters
MHMA	Springs. Flowing wells. <i>See also</i> MHE
MHMI	Subterranean. Channels. Caverns
MHMK	Creeps. Slumps. Landslips.
MHN	Running waters. Rivers
MHNA	Erosion
MHNC	Subaerial denudation
MHNE	River systems. Drainage basins

M <sub>H</sub> NF	Falls. Rapids
M <sub>H</sub> NG	Graded rivers
M <sub>H</sub> NK	Effects of changes of level
M <sub>H</sub> NO	Canyons. Gorges
M <sub>H</sub> NR	Rate of erosion
M <sub>H</sub> NU	Unequal rock resistance
M <sub>H</sub> NV	Rock terraces
M <sub>H</sub> NX	Influence of joints and folds
M <sub>H</sub> NY	Natural bridges
M <sub>H</sub> O	Valleys
M <sub>H</sub> OA	River terrace
M <sub>H</sub> OB	Meanders
M <sub>H</sub> OG	Land waste. Deposits
M <sub>H</sub> OI	Plains and denudation. Peneplain
M <sub>H</sub> OL	Alluvial fans
M <sub>H</sub> OP	Deltas
M <sub>H</sub> OR	Estuary Deposits
M <sub>H</sub> OT	Flood plains
M <sub>H</sub> OW	Mesas. "Bad lands"
M <sub>H</sub> P	Lakes
M <sub>H</sub> PA	Fresh water. River lakes
M <sub>H</sub> PL	Lacustrine deposits
M <sub>H</sub> PS	Saline. (Salt lakes)
M <sub>H</sub> PV	Extinct
M <sub>H</sub> Q	Ice and snow
M <sub>H</sub> QA	Snow and ice fields. Ice cap
M <sub>H</sub> R	Glaciers. With local list
M <sub>H</sub> RA	Neve
M <sub>H</sub> RC	Internal structure
M <sub>H</sub> RF	Movement

MHRI	Evaporation. Drainage
MHRK	Temperature
MHRN	Erosion and transportation. Glaciation
MHRP	Deposition. Drift. Boulders
MHRS	Moraines. Kames. Eskers
MHRT	Ground moraines. Drumlins
MHRV	Glacial ice sheets. <i>See also</i> MMO
MHS	Icebergs
MHSC	Coast Ice. Ground ice
MHT	Oceanic waters
MHU	Currents. <i>See also</i> MIF
MHV	Tides. <i>See also</i> MIR
MHW	Waves. <i>See also</i> MIO
MHWA	Erosion
MHWF	Transportation and deposition
MHWG	Beaches
MHWJ	Spits. Bars
MHWN	Coastal configuration. <i>See also</i> MIJI
MHWR	Infra-littoral deposits. <i>See also</i> MIKI
MHX	Abyssal deposits. <i>See also</i> MIKI
MHY	Ancient seas
MHYA	Palaeozoic
MHYM	Mesozoic
MHYT	Tertiary
MHZ	Geologic functions of life
MHZA	Destructive action
MHZC	Conservative and reproductive action
MHZE	Peat bogs
MHZI	Phosphate deposits

MHZO Coral reefs and islands

MHZU Human action

## MI Physiography. (Geophysics. Physical geography)

This subject properly belongs in Geography. But since it is sometimes treated as if it were a sub-division of Geology it is included here. So far as physiographic phenomena relate to geological rction they belong to MGB.

MIA Atmosphere. Books generally in Mc

MIAT Atmospheric tides

MID Hydrosphere. (Hydrography)

MIE Rivers

MIEB Bores

MIEW Waterfalls

MIF Lakes

MIG Salt lakes

MIH Seiches

MII Oceans. (Oceanography)

MIJ Ocean areas and basins

MIJA Depth. Soundings

MIJC Continental shelves

MJRI Strand lines. *See also* MHWN

MJK Fiords

MJP Polar Seas

MJT Tropical seas

MK Partially enclosed seas. (Mediterraneans)

MKA Origin. *See also* MHY

MKE Ocean floor

MKI Marine deposits. *See also* MHWR, MHX

MIL	Deep sea sounding and dredging
MIM	Sea water
MIMC	Composition, etc
MIMD	Density. Salinity
MIMT	Temperature
MIN	Circulation
MIO	Waves. <i>See also</i> MHW
MIO T	Tidal waves. <i>See also</i> MHGI
MIP	Currents. <i>See also</i> MHU
MIG	Gulf Stream
MIR	Tides. <i>See also</i> LUL, LZZ, MHV
MIRA	Dynamic theories
MIRE	Tidal friction. <i>See also</i> LUIB
MIRO	Observations and researches
MIRT	Tidal phenomena in bays and estuaries
MIS	Life. <i>See also</i> OGAG
MIT	Lithosphere
MIU	Continental areas and outlines
MIV	Islands. For Coral islands, <i>See</i> MHZO
MIN	Plains and plateaus
MIW	Deserts and oases
MIY	Mountains. <i>See also</i> MJR

## **MJ** Structural (Tectonic, Geotectonic) geology

MJA	Igneous rock structure
MJB	Sedimentary rock structure
MJBA	Stratification.

M <sub>J</sub> B <sub>E</sub>	Concretionary. <i>See also</i> M <sub>F</sub> I <sub>L</sub>
M <sub>J</sub> B <sub>I</sub>	Secretions. <i>See also</i> M <sub>F</sub> I <sub>C</sub>
M <sub>J</sub> C	Structure due to disturbance
M <sub>J</sub> D	Joints. Jointing
M <sub>J</sub> D <sub>A</sub>	In massive rocks
M <sub>J</sub> D <sub>E</sub>	In schistose rocks
M <sub>J</sub> D <sub>I</sub>	In stratified rocks
M <sub>J</sub> D <sub>O</sub>	Sandstone dikes
M <sub>J</sub> E	Inclination. Dip. Strike. Outcrop
M <sub>J</sub> F	Curvature. Folding
M <sub>J</sub> F <sub>A</sub>	Crumpling
M <sub>J</sub> F <sub>E</sub>	Deformation. Crushing
M <sub>J</sub> F <sub>I</sub>	Inversion
M <sub>J</sub> G	Cleavage
M <sub>J</sub> H	Dislocation
M <sub>J</sub> I	Faults
M <sub>J</sub> J	Thrust-planes. Throw
M <sub>J</sub> L	Diastrophism (Deformation) Physics of the crust
M <sub>J</sub> M	Earthquakes (Geological effects) <i>See also</i> M <sub>H</sub> R <sub>F</sub>
M <sub>J</sub> N	Slow massive movements
M <sub>J</sub> N <sub>A</sub>	Constant small movements
M <sub>J</sub> N <sub>E</sub>	Present elevation and subsidence
M <sub>J</sub> O	Great periodic movements
M <sub>J</sub> P	Continent formation
M <sub>J</sub> Q	Plateau formation
M <sub>J</sub> R	Mountain building (Orography) <i>See also</i> M <sub>I</sub> V
M <sub>J</sub> R <sub>A</sub>	Theories of origin
M <sub>J</sub> R <sub>F</sub>	Flexure and folding

MJRJ	Denudation
MJRM	Worn-down mountains (Monadnock)
MJS	Local orographic phenomena
MJT	Other sources of deformation
MJTA	Transfer of internal heat
MJTE	Extravasation of lava. <i>See also</i> MFKA
MJTG	Change in rate of rotation
MJTI	Interior rigidity
MJTS	Influence of sphericity
MJTT	Concave tracts in surface
MJTU	Vulcanism. <i>See also</i> MHB
MJV	Intrusions
MJW	Dikes. Veins. <i>See also</i> MFIF, MJDO
MJWL	Laccoliths, Sills, etc.
MJX	Extrusions. Volcanoes. <i>See also</i> MHC
MJXE	Volcanic eruptions. (in the Geologic past)
MJXL	Luna craters
MJY	Effects of heat
MJYA	Expansion
MJYC	Crystallization. Prismatic structure
MJYF	Fusion. Sublimation
MJYG	Aqueo-igneous fusion
	Metamorphism. <i>See</i> MFK
MJZ	Chemical geology

## MK Historical (Stratigraphic) Geology

MKA	Geogony (Geogeny)
MKB	Hypotheses
MKC	Nebular (Laplace)

MKD	Meteoric (Lockyer, Darwin)
MKE	Planetesimal (Chamberlain)
MKF	Hypothetical stages of development
MKG	Under the Nebular hypothesis
MKH	Under the Planetesimal hypothesis
MKI	Nuclear
MKJ	Atmospheric
MKK	Hydrospheric
MKP	Differentiation, Deformation
MKT	Age of the earth. Geological chronology
MKW	Geological climates
ML	Stratigraphy

Comprises works on the physical history, life and local distribution (with local list) of the ages and periods with their subdivisions. For these latter use the initial letter or letters of the formation or group *after* the local mark. Thus under MLG (Cambrian) the Cambrian in England will be MLG 449, and the English Harlech beds will be MLG 449h. Similarly the Potsdam in New York State will be MLG 851p. To avoid lengthening the class-mark, the larger subdivisions (as Lower Middle and Upper Cambrian) will *follow* the smaller local groups, instead of including them. Thus, the Upper Cambrian in England will be MLJ 449, while the Tremadoc slates will be MLGT 449.

MLA	Azoic (Archaeozoic) age
MLB	Archaean period
MLC	Origin
MLD	Eozoic (Proterozoic) age
MLE	Algonkin period
MLEA	Stratigraphic relation

M <sub>L</sub> E <sub>L</sub>	Life
	Comprises general works on the fossil remains of the period (unless these are treated of under the general heading M <sub>L</sub> E)
	Descriptions of individual genera may be put either in M <sub>S</sub> , or in their appropriate places in N <sub>J</sub> and O <sub>G</sub> .
M <sub>L</sub> F	Palaeozoic age
M <sub>L</sub> G	Cambrian period
M <sub>L</sub> G <sub>A</sub>	Physical history .
M <sub>L</sub> H	Lower
M <sub>L</sub> I	Middle
M <sub>L</sub> J	Upper
M <sub>L</sub> K	Life
M <sub>L</sub> L	<i>Silurian period.</i> General works. For sub-divisions see M <sub>L</sub> M and M <sub>L</sub> N
M <sub>L</sub> M	Ordovician. (Lower Silurian)
M <sub>L</sub> M <sub>A</sub>	Physical history
M <sub>L</sub> M <sub>L</sub>	Life
M <sub>L</sub> N	Silurian. Upper Silurian
M <sub>L</sub> N <sub>A</sub>	Physical history
M <sub>L</sub> N <sub>L</sub>	Life
M <sub>L</sub> O	Devonian
M <sub>L</sub> O <sub>A</sub>	Physical history
M <sub>L</sub> P	Lower
M <sub>L</sub> Q	Middle
M <sub>L</sub> R	Upper
M <sub>L</sub> S	Old Red Sandstone
M <sub>L</sub> T	Life
M <sub>L</sub> T <sub>M</sub>	Flora
M <sub>L</sub> T <sub>N</sub>	Fauna
M <sub>L</sub> U	<i>Carboniferous.</i> General works. For sub-divisions see M <sub>L</sub> V and M <sub>L</sub> W

MLV	Lower Carboniferous
MLVA	Physical history
MLVL	Life
MLVM	Flora
MLVN	Fauna
MLW	Upper Carboniferous
MLWA	Physical history
MLWL	Life
MLWM	Flora
MLWN	Fauna
MLX	Permian (Dyas)
MLXA	Physical history
MLXG	Deformation. Glaciation
MLXL	Life
MLXM	Flora
MLXN	Fauna
MLY	Mesozoic age
MLZ	Triassic
MLZA	Physical history
MLZL	Life
MLZM	Flora
MLZN	Fauna
MM	Jurassic
MMA	Physical history
MMB	Liassic (Lias)
MMC	Oolite
MMCA	Middle
MMCG	Lower
MMCL	Life

<b>MMCM</b>	Flora
<b>MMCN</b>	Fauna
<b>MMD</b>	<i>Cretaceous</i>
<b>MME</b>	Lower Cretaceous (Comanchean)
<b>MMEA</b>	Physical history
<b>MMEL</b>	Life
<b>MMEM</b>	Flora
<b>MMEN</b>	Fauna
<b>MMF</b>	Upper (Later) Cretaceous (Cretaceous)
<b>MMFA</b>	Physical history
<b>MMFL</b>	Life
<b>MMFM</b>	Flora
<b>MMFN</b>	Fauna
<b>MMG</b>	Cenozoic (Cainozoic. Tertiary) age
<b>MMH</b>	Eocene
<b>MMHA</b>	Physical history
<b>MMHL</b>	Life
<b>MMHM</b>	Flora
<b>MMHN</b>	Fauna
<b>MMI</b>	Oligocene
<b>MMIA</b>	Physical history
<b>MMIL</b>	Life
<b>MMIM</b>	Flora
<b>MMIN</b>	Fauna
<b>MMJ</b>	Miocene
<b>MMJA</b>	Physical history
<b>MMJL</b>	Life
<b>MMJM</b>	Flora
<b>MMJN</b>	Fauna

M <sub>MK</sub>	Pleiocene
M <sub>MKA</sub>	Physical history
M <sub>MKL</sub>	Life
M <sub>MKM</sub>	Flora
M <sub>MKN</sub>	Fauna
M <sub>ML</sub>	Pleistocene (Quaternary-Glacial)
M <sub>MN</sub>	Physical history
M <sub>MO</sub>	Glaciation
M <sub>MP</sub>	Drift
M <sub>MQ</sub>	Formations of the ice sheet
M <sub>MR</sub>	Fluvio-glacial deposits
M <sub>MS</sub>	Succession of the invasions
M <sub>MT</sub>	Formations outside the ice sheet
M <sub>MU</sub>	Causes of the glacial period
M <sub>MUA</sub>	Hypsometric hypothesis
M <sub>MUE</sub>	Astronomic hypothesis
M <sub>MUI</sub>	Atmospheric hypothesis
M <sub>MV</sub>	Life
M <sub>MVM</sub>	Flora
M <sub>MVN</sub>	Fauna
M <sub>MW</sub>	Life of inter-glacial stages
M <sub>MX</sub>	Life of non-glaciated regions
M <sub>MY</sub>	Man in the glacial period

*See also Anthropology*

M <sub>MZ</sub>	Present (Human. Post-glacial)
M <sub>MZA</sub>	Physical history
M <sub>MZL</sub>	Life
M <sub>MZM</sub>	Flora
M <sub>MZN</sub>	Fauna

## MN Topographic Geology

With local list

Comprises not only geological surveys (MGN) but all works on the geology of any region such as: The Geology of Wales. The Geology of Narragansett Bay. In small libraries, local stratigraphic works, even, had better be placed here.

MNA Geological guides

With local list

Mo Geological surveys

With local list

MP Geological maps

With local list

When geological sub-divisions are needed use the class-marks of ML, followed by the local mark.

## MQ Palaeontology

MQA Miscellaneous questions

MQB Fossils and chronology

MQD Palaeontology and evolution

MQF Fossil collecting. Geographical excursions

MQK Dealers' catalogues

MQM Microscopic examination. Micropalaeontology.

*See also MBFP*

MR Local palaeontology

With local list

Comprises works dealing with the general fossil flora and fauna of particular countries or regions.  
See also MT, MU.

Ms            Local stratigraphic palaeontology

With local list

Comprises works dealing with the local flora and fauna of particular formations, such as: The Permian fossils of Germany. If preferred these can go in the appropriate sub-divisions of ML. See note to MLEL

MT            Palaeobotany

When it is necessary to sub-divide MT and MU for individual families or other groups, follow the classification of Descriptive Botany (NJ) and Zoology (OG). For works treating *locally* of particular fossil plants or animals, add the country number to the class-mark thus: Fossil cycads of Germany, MTRX47, Vertebrate fossils of Wyoming, MUP933.

MU            Palaeozoology. See note to MT

## MUV Economic geology

Muw            Agriculture

Muy            Mining

Muz            *Others*





# Biology

Classification by Mr. Richard Bliss, Librarian of the Redwood Library,  
Newport, R. I.

- 1 Study. Philosophy
- 2 Bibliography
- 3 Biography
- 4 History
- 5 Dictionaries
- 6 Year-books. Hand-books
- 7 Periodicals
- 8 Societies
- 9 Collections

**Mv** Comprehensive and miscellaneous works

**Mva** Biological stations

With local list

**Mvb** Experimental evolution stations

With local list

**Mvc** Laboratories

Construction, arrangements, etc.

Descriptions of local laboratories will go in Mva

**Mvd** Methods of research. Apparatus

**Mve** Microscope. *See also* Mbd, Oan

MVF	Technique. <i>See also</i> MBE, OAM
MVFA	Preparation. Cytological methods
MVF <sub>P</sub>	Photography
MVF <sub>R</sub>	Radiography
MVF <sub>S</sub>	Measurements

## MVG Nomenclature

### Mvh Systematic and Comparative

MVI	Morphology. Anatomy. <i>See also</i> ND, OB
MVIA	Promorphology. Types of structure
MVIB	Mathematical treatment
MVIC	Symmetry
MVID	Anaxial
MVIE	Homaxial (Spherical)
MVIF	Monaxial (Radial)
MVIG	Bilateral
MVIH	Segmental
MVIM	Morphological correspondence
MVIN	Homology. <i>See also</i> OEU
MVIO	Analogy. <i>See also</i> OEUT
MVIP	Tectology. (Structural morphology)  General and comparative works. Books treating of detailed morphology will usually go in ND or OB.
	Protoplasmic and cellular structure. <i>See</i> MVL
MVIR	Multicellular structure
MVIS	Histology  General and comparative works. For plant histology see NC, and for animal histology OEX.

MVIT	Teratology (Malformations) <i>See also</i> NDL, OET
MVIU	Anomalies
MVIV	Abnormalities
MVIW	Reduplication. Suppression
MVIY	Hermaphroditism
MVJ	Physiology
	General and comparative works. For particular plant or animal physiology see NE and Oc respectively.
	Cellular. <i>See</i> Mvp, Mvr
MvjB	Metabolism
MvjC	Constructive (Anabolic)
MvjD	Destructive (Catabolic)
MvjG	Interchange of energy. Performance of work. (Kraftwechsel)
MvjH	Movement. <i>See also</i> Mvlm
MvjI	Amoeboid
MvjM	Muscular
MvjP	Growth. <i>See also</i> Mvx
MvjS	Sensation
MvjT	Response to stimuli. Irritability. <i>See also</i> Mvlx
MvjU	Weber's law
MvjV	Fechner's law
MvjX	Reaction
MvjZ	Production of light, heat and electricity
Mvk	Cytology. Cell-theory. Microbiology
Mvl	Protoplasm. Cytoplasm
Mvla	Chemical composition
Mvlb	Structure. Organization
Mvlc	Speculative theories

MvLD	Micromeric (Micromerism)
Arrange alphabetically, as:	
MVLDA	Darwin (Gemmules)
MVLDD	De Vories (Pangens)
MVLDN	Naegli (Micellae)
MVLDS	Spencer (Physiological units)
MVLE	Other
MVLED	Delage's machine theory
MVLEL	LeDantec's theory of chemism
MVLEV	Verworn's biogen hypothesis
MVLF	Empirical theories
MVLG	Monomorphic
MVLGA	Alveolar ( <i>Bluetsehli</i> )
MVLGF	Filar (Flemming)
MVLGG	Granular (Altmann)
MVLH	Polymorphic
MVLI	Protoplasmic mechanics
MVLK	Physiological properties
MVLM	Motility. Movement. <i>See also</i> MvjH
MVLMA	Amoeboid
MVLMC	Ciliary
MVLN	Inter-cellular motion
MVLO	Rotation
MVLP	Streaming. Circulation
MVLQ	Orientation movement
MVLs	Nutrition
MVLT	Metabolic processes
MVLU	Waste products
MVLV	Irritability. Contractility

MVLW	Mechanical stimuli
MVLWA	Light
MVLWH	Heat
MVLWL	Electricity
MVLWT	Chemotaxis
MVLX	Hydrotropism
	Reproduction. <i>See</i> MVP
MVM	Cell structure
	Cytoplasm. <i>See</i> MVL
MVN	Nucleus. "Germinal vesicle"
MVNC	Nuclear membrane
MVND	Linin
MVNE	Chromatin. "Nucleoli." Idioplasm. <i>See also</i> MxVB
MVNI	Nuclear sap
MVNJ	M multinucleate cells
MVNK	Plastids
MVNMM	Chromatophores
MVNO	Chloroplasts
MVNPP	Leucoplasts
MVNQ	Chromoplasts
MVNS	Vacuole
MVNT	Archoplasun. Aster
MVNVP	Centrosome. Centrosphere. Blepharoplast
MVNXP	<i>Other cell contents</i>
MVNYP	Reserve material
MVO	Physical properties
MVOA	Osmosis
MVOR	Turgescence

MVP	Cell division. (Cleavage. Segmentation)
MVPA	Nuclear division
MVPC	Chromosomes
MVPS	Spindle
MVPV	Mid-body. Cell-plate
MVQ	Mitosis. (Indirect division. Karyofcineses)
MVQA	Prophase
MVQB	Metaphase
MVQC	Anaphase
MVQD	Telophase
MVQG	Pleuripolar mitosis
MVQH	Amitosis. (Direct division. Fragmentation)
MVQJ	Free cell formation
MVQL	Formation of sexual cells (Gametes) Gametogeny
MVQM	Spermatogenesis
MVQN	Spermatocyte sperm
MVQO	Oogenensis
MVOP	Oocyte. Oosphere
MVQR	Maturation of the ovum
MvQS	Polar bodies
MvQU	Reduction divisions
MVQV	Heterotypic mitosis
MVQW	Homotypic mitosis
MVR	Cell growth
MVRC	Cytomorphosis
Mvs	Reproduction. Embryology
MvSA	Asexual
MVSAF	Fission. Gemmation. (Budding)
MVSAS	Sporulation

MvSB	Sexual. Fertilization
MvSC	Conjugation. Zygosis
MvSD	Heteropolar mitosis. ( <i>Schuadin</i> )
MvSE	Spermatization
MvSF	Irrégularities
MvSG	Double fertilization. Dispermy
MvSH	Heterogenesis. <i>See also</i> ODD. Not to be confused with MYT
MvSI	Parthenogenesis. Apogamy
MvSJ	Geneagenesis
MvSK	Alternating generations
MvSN	Artificial fertilization. Better in MvWM
MvSO	Apomixis
MvSP	Earliest theories and investigation
MvSQ	Harvey
MvSR	Malpighi
MvST	Predelineation (Preformation) theory
MvSU	Incasement theory
MvSUA	Animalculists (Spermists)
MvSUO	Ovulists (Ovists)
MvSV	Epigenesis
MvSW	Wolff
MvT	Moderu embryology
MvTA	Von Baer
MvTC	Reichert
MvTE	Kolliker
MvTG	Kovalevsky
MvTJ	Balfour
	Cell theory. <i>See</i> MvK
MvTR	Germ-layer theory. ( <i>Wolff. Parker</i> )

	Germinal continuity. <i>See</i> MXD
MVTU	Recapitulation theory. <i>See also</i> MVXH
MVTV	Von Baer's law
MVTW	Germinal arears. Germinal localization
MVTX	Organogenetic areas ( <i>His</i> )
MVU	Morphological embryology
MVUA	Cleavage
MVUB	Holoblastic
MVUC	Meroblastic
MVUD	Blastomeres
MVUE	Blastulation. Blastula
MVUF	Formation of the blastoderm ( <i>Germinal layer</i> )
MVUG	Ectoderm
MVUH	Endoderm
MVUI	Mesoderm
MVUJ	Somatopleure
MVUK	Splanchnopleure
MVUM	Gastrulation. Gastrula
MVUN	Gastraea theory
MVUO	Formation of the nervous system
MVUP	Central
MVUQ	Peripheral
MVUR	Development of the tissues, etc.
MVUT	Development of organs
MVUV	Development of reproductive system
MVUX	Correlation of reproductive system and organs
MVUY	Sex differentiation. Origin of sexual characters
MVUZ	Determination of sex
	Inheritance of sex. <i>See</i> MXFM

Mvv	Embryological measurement methods
Mvvk	Kainogenesis (Mehnert)
Mvw	Experimental embryology (Morphogenesis. Developmental Mechanics. Bio-mechanics)
Mvwa	Isolation of the Clastomeres
MvwB	Experiments on the development of the egg
Mvwc	Pressure. Agitation
Mvwd	Modification of temperature
Mvwe	Chemical reagents
Mvwf	Experiments with radium
Mvwg	Alteration of the medium
Mvwi	Mutilation. Grafting
MvwL	Regulation. Self-regulation. Regeneration
MvwM	Artificial fertilization
Mvwn	Work of individual investigators
Mvwp	Driesch
Mvws	Loeb
Mvww	Schultz and Hertwig
Mvx	Development. Post-embryonic development
Mvxa	Physiology of development. <i>See also</i> Mvw
Mvxb	Formative stimuli
Mvxc	Conditions of differentiation
Mvx <sub>F</sub>	Self-differentiation
Mvx <sub>H</sub>	Law of acceleration. Earlier inheritance. ( <i>Darwin</i> )
Mvx <sub>I</sub>	Autogenetic. ( <i>Haeckel</i> .)
Mvx <sub>J</sub>	Precocious segregation. ( <i>Lankester</i> )
Mvx <sub>M</sub>	Theory of abbreviations. "Short cuts"
Mvx <sub>N</sub>	Heterochrony. ( <i>Haeckel</i> )
Mvx <sub>O</sub>	Excess of development

MvxP	Aplasy
MvxQ	Suppression of parts
MvxR	Coalescence of parts
MvxS	Regeneration of lost parts. <i>See also</i> MvwI, Odr
MvxU	Degeneration (Ontogenetic) <i>See also</i> Mxy
MvxV	Parasitism. <i>See also</i> Nfp, Oej
MvxW	Arrest of development. Super-larvation
MvxY	Law of decay ( <i>Cope, Hyatt</i> ) Retrograde development
MvxZ	Senescence. Death

## Mvy Life. Vital phenomena. Living matter

MvyA	Bio-physics. Theories of life
MvyB	Mechanical theory. Physico-chemical theories
MvyE	Vitalism. Neo-vitalism
MvyF	Bathmism. (Growth force). ( <i>Cope.</i> ) <i>See also</i> Mylm, Myqc
MvyG	Genetic energy ( <i>Williams</i> )
	Self-adaptation ( <i>Henslow</i> ) <i>See</i> Mxwn
MvyI	Direction ( <i>Eimes</i> )
MvyK	Directive force
MvyM	Vital principle ( <i>Driesch</i> )
MvyN	Vital substance ( <i>Schneider</i> )
MvyS	Biogenesis. Origin of life
MvyT	Abiogenesis. (Spontaneous generation. Archebiosis)
MvyU	Special creation
MvyV	Evolution. Books generally in Mw and My
	Developmental mechanics. <i>See</i> Mvw

## Mw Genetic biology. Organic evolution

Mwa	Ontogeny. Bionomics. <i>See also</i> Oe
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MwB	Selection and preservation. <i>Or in Myes. Better here</i>
Mwc	Mutual relations
Mwd	Mimetic resemblance. Mimicry. Coloration
Mwdc	Cryptic
Mwdf	Protective colors. (Procryptic)
Mwdi	Aggressive colors. (Anticryptic)
Mwdl	<i>Pseudosematic</i>
Mwdp	Protective mimicry. (Pseudaposematic)
Mwdr	Aggressive mimicry. (Pseudepisematic) (Alluring colors. Batesian mimicry)
Mwds	<i>Sematic</i>
Mwdw	Warning colors. (Aposematic)
Mwdy	Warning colors in different species. (Muellerian mimicry)
Mwe	Recognition markings. Signaling colors. (Episemantic)
Mwf	Courtship colors. (Epigamic)
Mwg	Sexual selection. (Selective mating)
Mwga	Endogamic mating
Mwge	Preferential (Apolegamic) mating
Mwgi	Assortive (Homogamic) mating
Mwgo	Heterogamic mating
Mwh	Relations to environment (Hexiology) <i>See also Nf, Oex</i>
Mwi	Inorganic environment. <i>See also Mcyp, Mcyt</i>
Mwj	Plants
Mwk	Animals
Mwl	Organic environment
Mwm	Plants
Mwn	Animals
Mwo	Struggle for existence. <i>Or in Evel. Better here</i>

MWP	Cessation of selection. Panmixia
MwQ	Accommodation. (Functional adjustment)
MwQA	Acclimatization
MwQE	Naturalization
MwQR	Equilibrium. Balance
MWR	Distribution of plants and animals. Books generally in NH, OGA
Mws	Isolation. Segregation
MwsA	Indiscriminate (Apogamy.) Separate breeding ( <i>Gulick</i> )
MwsH	Discriminate (Homogamy). Segregate breeding ( <i>Gulick</i> )
MwsM	Accumulative (Intensive) ( <i>Gulick</i> ). Amixia ( <i>Weismann</i> )
MwsR	By selection (Restricted natural selection)
MwsU	By elimination (Darwin's natural selection). <i>See also</i> MYE
MwsW	Geographical
Mwt	Physiological. Sexual
Mwta	Differential fertility
Mwte	Sterility. Infertility. <i>See also</i> MXFN
Mwti	Selective sterility
Mwtj	Mechanical selection ( <i>K. Jordan</i> )
Mwtp	Physiological selection ( <i>Romanes</i> )
Mwts	Selective association ( <i>Wallace</i> )
	Sexual selection. <i>See</i> MWG
Mwu	Social life. <i>See also</i> OEH
Mwua	Symbiosis. Commensalism
Mwuc	Colonies
Mvv	Phylogeny. Origin and descent. <i>Descendenzlehre</i>
Mww	Phyletic relationship. Taxonomy

Mwx	Species. Varieties
Mwy	Mathematical treatment
Mwz	Factors of evolution. General works only
Mx	Heredity. Inheritance
Mxa	Germinal elements
Mxb	Physical basis
Mxba	Pangenesis. Pangens. (Gemmules.)
Mxbb	Brook's modification
Mxbd	DeVries modification
Mxbf	Formative substance ( <i>Loeb</i> )
Mxbh	Enzymes ( <i>Driesch</i> )
Mxbm	Mutual influence of cells
Mxbq	Theory of nuclear distribution
Mxbv	Idioplasm. <i>See also</i> Mxc
Mxc	Germ-plasm theory (Weismann). <i>See also</i> Mxd
Mxcd	Determinants. Biophors
Mxci	Ids. Idants
Mxd	Doctrine of germinal continuity
Mxdc	Cell succession
Mxde	Work of Jaeger
Mxdh	Work of Hertwig
Mxdn	Work of Nussbaum
Mxdv	Amphimixis
Mxdw	Experimental study
Mxe	Germinal selection (Weismann)
MxeA	Intraselection (Roux) Histonal selection
MxeH	Hertwig's view
Mxen	Nageli's theory. <i>See also</i> Mvqn
Mxer	Heredity and development. Causes of differentiation
Mxet	Mathematical treatment

Mx <sub>F</sub>	Laws of ancestral inheritance
Mx <sub>FB</sub>	Blended
Mx <sub>FC</sub>	Exclusive
Mx <sub>FD</sub>	Particular
Mx <sub>FI</sub>	Homochronous heredity
Mx <sub>FJ</sub>	Prepotency
Mx <sub>FK</sub>	Telegony
	Deviation from normal law. <i>See</i> Mx <sub>M</sub>
Mx <sub>FM</sub>	Heredity of sex
Mx <sub>FN</sub>	Fertility. Sterility. <i>See also</i> Mw <sub>TE</sub> , Mx <sub>FR</sub>
Mx <sub>FO</sub>	Cross sterility
Mx <sub>FP</sub>	Inheritance of fertility
Mx <sub>FQ</sub>	Net (effective) fertility
Mx <sub>FR</sub>	Reproductive (Genetic) selection ( <i>Pearson</i> )
Mx <sub>FT</sub>	Color heredity
Mx <sub>G</sub>	Transmission of acquired characters
Mx <sub>GA</sub>	Normal
Mx <sub>GE</sub>	Abnormal (Epigenetic)
Mx <sub>GI</sub>	Use-inheritance. Kinetogenesis. <i>See also</i> Mv <sub>P</sub>
Mx <sub>GR</sub>	Reversion (Atavism)
Mx <sub>H</sub>	Empirical study of heredity
Mx <sub>HB</sub>	Biometric and statistical methods
Mx <sub>HD</sub>	Mendel's experiments. Alternative inheritance. Mendelism
Mx <sub>HG</sub>	Gametic segregation
Mx <sub>HK</sub>	Law of dominance
Mx <sub>I</sub>	Hybridity. Cross-breeding. (Interbreeding. <i>See also</i> Oe <sub>V</sub> )
Mx <sub>J</sub>	Artificial hybrids. Experimental methods
Mx <sub>K</sub>	Plants

MxKB	Work of Burbank
	Work of Mendel. <i>See</i> MxHD
MxL	Animals
MxLM	Morgan's experiments
MxLP	Pflueger's experiments
Mxm	Variation. Deviation. <i>See also</i> Mxt
Mxn	Congenital variation and acquired characters. <i>See also</i> MxtA
MxNC	Genetic (Congenital) variation
MxNK	Acquired variation. <i>See also</i> MxG
Mxo	Continuous (Fluctuating. Normal)
Mxp	Discontinuous (Definite. Abnormal). Mutation (Sports). <i>See also</i> Myt
Mxpa	Atavistic
Mxpd	Degressive
Mxpg	Progressive
Mxpk	Retrogressive
Mxpn	Transgressive
Mxpt	Determinate
Mxq	Coincident. <i>See also</i> Myj
Mxqc	Correlated
Mxqm	Meristic
Mxqn	Homoesis ( <i>Bateson</i> ) Metamorphy ( <i>Masters</i> )
Mxqp	Substantive
Mxqr	Seasonal
Mxqs	Sexual
Mxqx	Laws of variation
Mxr	Mathematical treatment
Mxre	Law of error. Probability
Mxs	Biometrics

MxSA	Statistical methods
MxSB	<i>Integral variation</i>
MxSG	<i>Graduated variation</i>
MxsQ	Quantitative measurements
MxST	Experimental treatment. Experimental variation Variation under domestication. <i>See</i> Mjx
Mxt	Modification. Ontogenetic variation
MxtA	Acquired characters. Acquired variation. <i>See also</i> Mxn
MxTE	Modification directly by environment
MxtI	Modification indirectly by use and disuse
MxTO	Mutilations
MxtU	Plasticity
MxU }	Inheritance of acquired characters. <i>See</i> MxG
Mxv }	Particular cases of variation
	If put in Biology arrange according to the grouping in NJ and OG
Mxw	Adaptation. Structural adjustment. <i>See also</i> OEW
MxWA	Through variation (Hereditary)
MxWD	Through modification (Acquired)
MxWH	Co-adaptation
MxWK	Convergence. Parallelism. <i>See also</i> MyR, OEWV
MxWN	Self-adaptation ( <i>Henslow</i> ) <i>See also</i> MyKH
MxWR	Adaptation and regeneration
Mxx	Regression
Mxy	Degeneration (Phylogenetic.) <i>See also</i> Myxu
Mxz	Extinction
My	Origin of species. Particular evolutionary theories
MyA	Earlier and general theories
MyAB	Buffon

MYAD	R. Darwin
MYAP	Prichard
MYAS	Spencer
MYC	Lamarek's theory. Lamarckism. <i>See also</i> MYL, MYN
MYD	Darwinism (Darwin. Wallace.) <i>See also</i> MYH
MVDA	Anti-Darwinian. (General works.) This does not include works advocating some particular theory supplementary, or antagonistic to Darwinism.
MVE	Natural selection. Variation and heredity. <i>See</i> Mx, Mxm
MXEF	Excess. Overproduction.
MYEL	Struggle for existence. Better in Mwo
MYES	Survival. Individual selection. Better in Mwb Sexual selection. <i>See</i> MWG
MYF	Purposive (Artificial) selection (Plants and animals under domestication.)
MYG	<i>Post-Darwinian theories.</i> In small libraries this will include all theories from MYH to Mys.
MYH	Neo-Darwinism (Ultra-Darwinism.)
MYHA	Wallace's exposition.
MYHM	Weismannism
MYHR	Retrogressive development. Evolution by atrophy. <i>See also</i> MWP

MYI	Polytypic (Divergent) evolution
MYJ	Orthoplasy. Organic (Indirect) selection <i>See also</i> MxQ
MYK	Anti-selection school.
MYKH	Henslow
MYKS	Sachs
MYL	Neo Lamarckism
MYLA	Inherited affects of use and disease. <i>See also</i> MxTI
MYLM	Bathmic evolution
MYM	Individual theories
MYMB	Bailey ("Survival of the unlike")
MYMG	Geddes
MYMH	Hyatt
MYMO	Osborne
MYMP	Packard
MYN	Orthogenetic evolution
MYNO	Orthoselection
MYO	Orthogenesis
MYOE	Eimer
MYOG	Giard
MYOP	Perrier
MYP	Kinetogenesis. Dynamical evolution (Mechanico physical theories) <i>See also</i> MxGI
MYQ	Individual exposition
MYQC	Cope

MyQN	Nageli
MyQR	Rider
MyR	Polyphyletic evolution. Convergence. <i>See also MxWK</i>
Mys	Metakinesis (Jacketl)
MyT	Heterogenesis. Mutation theory. <i>See also Mxp</i>
Mvu	Work of De Vries
Mvv	Experimental evolution
Myvd	De Varigny
Myvp	Plateau
Myvs	Semper Evolution of man. <i>See Anthropology</i>
Myw	Evolution and philosophy. Better BGE, B, alternative arr.
Mywa	Mental evolution. Better in BICA.



# BOTANY

Classification made by Mr. Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

## SYNOPSIS

General works N

Systematic botany NB

Histology NC

Morphology ND

Physiology NE

Oecology NF

Geographic Oecology NG

Geographical distribution NH, NI, NK

Plant biology NIZ

Phytography (Descriptive botany) NJ

Classification NM

Nomenclature NMX

Protophyta NN

Thallophyta NO

Archigonatae NPN

Spermatophyta NRZ

Sylvas NY

Phytopathology NYZ

Economic and Medical botany NZ

## Preliminaries and Generalities

- N·1 Study of botany
- N·2 Bibliography of botany
- N·3 Biography of botanists
- N·4 History
- N·5 Dictionaries
- N·6 Tables, Handbooks, etc.\*
- N·7 Periodicals
- N·8 Societies†
- N·9 Collections

## · N Comprehensive and miscellaneous works

### NA Botanical gardens. Arboreta

With local list

### NAH Herbaria, Museums

With local list

### NAL Laboratories

With local list

### NAM Laboratory manuals

### NAP Collecting and preserving. Botanizing

Subdivisions as in MBB or OAB if needed

### NAR Botanical miscellanies

#### NAS Plant lore      *See also* BUB

#### NAT Language of flowers. Floral emblems

#### NAU National flowers

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\*When "Handbook" or "Manual" merely means a short general treatise on botany it goes in N  
†A society publication relating to one topic of botany goes under its appropriate head

# NB Systematic botany. PhytoLOGY. Life of plants

The anatomy and physiology of any particular group takes the group letter in addition to NB, as: Physiology of ferns—NBQ

## NC Histology (Internal morphology)

NCA	Plant cell
NCB	Cytoplasm. Protoplasm
NCB	<i>See also</i> Biology
NCC	Chemical composition
NCD	Protoplasmic inclusions (Reserve and waste products)
Arranged alphabetically as:	
NCDA	Albumen
NCDF	Fats and oils
NCDS	Starch
NCDT	Sugar
NCE	Hyaloplasm (Ectoplasm)
NCF	Microsomes (Metaplasma)
NCG	Vacuoles
NEG	Cell sap
NEGII	Coloring matter. Anthocyanin. <i>See also</i> NEKO
NEGIII	Tonoplast
NCH	Nucleus
NCNA	Nucleoplasm (Karyoplasm, Nuclein)
NCNC	Nuclear cavity
NCNS	Blepharoplast
NCI	Plastids (Chromatophores)
NCIC	Chloroplasts
NCIE	Pyrenoids
NCII	Chromoplasts
NCIL	Leucoplasts. Starch formers
NCJ	Centrosomes
NCK	Multinucleate cells
NCL	Cell wall <i>See also</i> NCN
NCLC	Cellulose
NCLE	Plasmolysis
NCLG	Thickening

NCLI	Incrustation. Cryoliths
NCLK	Chemical changes <i>See also</i> NCP
NCLM	Gelatinization
NCLP	Lignification
NCLS	Suberification (Cutterization)
NCLT	Mineralization
NCM	Cell formation. Cell division <i>See also</i> Biology
NCMA	Direct nuclear (Amitotic) division (Fragmentation, Fission)
NCMB	Indirect (Mitotic) division (Mitosis, Karyokinesis)
NCMC	Reduction division
NCMD	Heterotypic
NCME	Homotypic
NCML	Cell division
NCMM	Multicellular formation
NCMN	Free cell formation
NCMO	Budding
NCMQ	Zoospores
NCMR	Conjugation <i>See also</i> NEU
NCMS	Gamete
NCMT	Ovum
NCMU	Spermatozoid
NCMV	Zygote
NCMX	Cell fusions
NCN	Tissues. Cell aggregates <i>See also</i> NCU
NCO	Intercellular space
NCOA	Schizogenic
NCOE	Lysogenic
NCP	Parenchyma <i>See also</i> NCLK
NCPA	Sclerotic
NCPE	Lignified
NCPI	Suberous (Cork)
NCQ	Vascular
NCQE	Epiderma
NCQH	Hypoderma
NCQI	Prosenchyma (wood fiber)
NCQJ	Collenchyma
NCQK	Sclerenchyma

NCQN	Vascular bundles
NCQO	Fibrous
NCQT	Traheary
NCR	Conductive (other than tracheary)
NCRF	Sieve-tubes
NCRL	Lactiferous Ducts. Latex
NCS	Special secretory cells
NCSR	Idioblasts, Sclerids
NCSM	Muellage cells
NCSO	Oil cells
NCT	Undifferentiated tissue (Meristem. Embryonic tissue)
NCPT	Promeristem
NCU	Tissue systems
NCUA	<i>Primary</i>
Ncv	Epidermal (Tegumentary)
Nevc	Cuticle
Neve	Epidermal cells. Hydathodes
Nevg	Stomata
NcvI	Water pores
NcvJ	Trichomes (Hairs. Bristles) <i>See also NDGH</i>
NcvP	Emergenceles (Prickles)
NcvQ	Secreting glands
NcvR	Colleters
NcvS	Digestive glands
NcvT	Inter-cellular secretion cavities
NcvV	Velamen radleum
NCW	Vascular bundle system (Fibro-vascular system)
NCWA	Traheal tissue (Xylem)
NCWE	Sieve-tissue (Phloem. Bast)
NCWI	Cambium tissue
Ncx	Fundamental system
NCXC	Cortex
NCXD	Medulla (Pith)
NCXE	Secondary (Waste) deposits
NCXN	Distribution of primary tissues
NCXO	Stem
NCXR	Root
NCXT	Leaf. Floral leaves
NCXZ	<i>Secondary</i>
NCY	Cambium layer

NCYA	Fascicular
NCYC	Interfascicular
NCYE	Annual rings
NCYH	Duramen (Heart-wood)
NCYK	Alburnum (Sap-wood)
NCYN	Secondary growth
NCYP	Periderm
NCYQ	Phellogen (Cork-cambium)
NCYR	Bark
NCYS	Absciss layer. Fall of the leaf
NCYT	Callus
NCYU	Burrs
NCZ	Histology of particular plant forms. Subdivide as in NJ

## ND Morphology. Plant body

NDA	General morphology
NDAC	Segmentation of plant-body <i>See also</i> NDE
NDAD	Thallus. Thallophytes. <i>See also</i> No
NDAE	Transition to Cormus
NDAF	Cormus. Cormophytes <i>See also</i> NPN
NDAN	Unicellular plants
NDAO	Colonies
NDAR	Filamentous plants
NDAV	Vascular plants <i>See also</i> NQ
NDB	Symmetry
NDBA	Radial (Multilateral)
NDBB	Bilateral
NDBC	Isobilateral
NDBG	Zygomorphic. Dorsiventral
NDBM	Arrangement of members
NDBN	Actinomorphic
NDC	Phyllotaxis
NDCI	Anthotaxis (Inflorescence)
NDCK	Zygomorphic
NDCR	Asymmetrical
NDD	Branch systems
NDDC	Dichotomous
NDDE	Lateral branching
NDDF	Monopodial
NDDH	Cymosé
NDDI	Sympodial

<b>NDDN</b>	Adventitious. Suckers
<b>NDDV</b>	Cohesion and adhesion
<b>NDDZ</b>	Structural deviation. Teratology (Malformations)
<b>NDE</b>	Special morphology
<b>NDF</b>	Thallus
<b>NDFB</b>	Thalloid shoot
<b>NDFD</b>	Transition to leafy shoot
<b>NDFL</b>	Leafy shoot <i>See also NDH</i>
<b>NDFM</b>	Growing point
<b>NDFN</b>	Bud
<b>NDFR</b>	Resting buds, Bud scales
<b>NDFS</b>	Leaf buds. Prefoliation (Vernation)
<b>NDFT</b>	Flower buds. Prefloration (Aestivation)
<b>NDFV</b>	Adventitious buds
<b>NDG</b>	Root (Hypercotyl). Epitropism
<b>NDGA</b>	Primary
<b>NDGD</b>	Adventitious. Secondary
<b>NDGF</b>	Root cap. Ohlert's experiment
<b>NDGH</b>	Trichomes (Root-hairs)
<b>NDGK</b>	Root tendrils
<b>NDGM</b>	Metamorphosed roots
<b>NDGP</b>	Aerial roots. Epiphytes <i>See also NFR</i>
<b>NDGS</b>	Suction roots. Haustoria (Suckers)
<b>NDGT</b>	Parasites
<b>NDGU</b>	Saprophytes <i>See also NFB</i>
<b>NDGW</b>	Climbing roots
<b>NDH</b>	Stem (Cauloma, Hypocotyl)
<b>NDHA</b>	Structure
<b>NDHE</b>	Metamorphosed stem
<b>NDHF</b>	Climbing
<b>NDHI</b>	Tendrils
<b>NDHQ</b>	Bulb
<b>NDHR</b>	Tuber
<b>NDHT</b>	Thorns. Spines
<b>NDHV</b>	Xerophytic stems <i>See also NGKE</i>
<b>NDHW</b>	Phyllocladia (Foliage stems)
<b>NDHX</b>	Cladophyl (Cladode. Leaf-stem)
<b>NDI</b>	Leaf (Foliage leaf)
<b>NDIA</b>	Leaf base
<b>NDIG</b>	Leaf stalk (Petiole)
<b>NDIH</b>	Phyllodia
<b>NDIJ</b>	Leaf blade

NDIK	Venation
NDIL	Stomata
NDIN	Glands. Water-glands
—	Vernation <i>See NDFS</i>
NDIS	Compound leaves
NDIU	Heterophyllly
NDIW	Symmetry. Asymmetry <i>See also NDB</i>
—	Phyllotaxis <i>See NDC</i>
NDJ	Modified leaves
NDJE	Leaf spines
NDJK	Leaf tendrils
NDJN	Scale leaves
—	Floral leaves <i>See NDK</i>
NDJS	Sporophysis
NDJU	Ascidia (Pitchers)
NDJV	Insect traps <i>See also NFII</i>
NDK	Flower (Floral leaf)
NDKA	Perianth
NDKB	Calyx (Sepals)
NDKC	Corolla (Petals)
NDKE	Androecium (Stamens)
NDKI	Pollen
NDKN	Gynoecium. (Pistils)
NDKO	Ovary
NDKS	Nectary
NDKT	Torus
—	Anthotaxy <i>See NDCT</i>
NDKV	Symmetry <i>See also NDB, NDBM</i>
NDKW	Actinomorphous
NDKX	Zygomorphous
—	Prefloration (Aestivation) <i>See NDFT</i>
NDL	Floral modification
NDLA	Irregularity
NDLB	Imperfection. Suppression
NDLH	Adnation
NDLK	Chorisis (Deduplication)
NDLM	Multiplication of parts
NDLT	Enations
NDM	Reproductive organs. Reproduction
	For the sake of convenience the physiology of reproduction—so far, at least, as refers to the initial processes—is included in Morphology with the description of the organs concerned.
NDMA	Asexual (Blastemal) reproduction
NDMB	Vegetative multiplication. Budding
NDN	Spore reproduction
NDNA	Sporophyte
NDNC	Spores. Gonidia

NDNE	Zoospores. Zoogonidia
NDNII	Homosporous reproduction
NDNK	Heterosporous reproduction
NDNS	Sporangia. Gonidangia
NDNV	Gonidlophore
NDNW	Sporophore
NDNX	Sporophyl
NDNY	Hypsophyl
NDO	Sexual reproduction
NDOA	Gametophyte
NDOB	Gametes
NDOC	Isogamous. Isogamy
NDOD	Heterogamous. Heterogamy
NDOE	Oospore
NDOF	Spermatozoid
NDOG	Gametangia
NDOH	Oogonium (Archegonium)
NGOJ	Antheridium
NDOK	Pollinodium
NDOM	Procarp (Archicarp)
NDOP	Gametophore
NDOR	Archegoniophore
NDOS	Antheridiphore
NDOT	Gametophyl
NDOU	Conjugation
NDOV	Zygophore
NDP	Pollination. Fertilization
NDPA	Autogamy Self-fertilization
NOPC	Cleistogamy
NDR	Allogamy (Cross fertilization. Intercrossing)
NDRA	Dichogamy
NDRB	Heterandry
NDRG	Synaeamy (Synanthesis)
NDRI	Dimorphism (Heterostyly)
NDRJ	Trimorphism
NDRL	Polymorphism
NDRM	Monoeclism
NDRE	Dioecism
NDRP	Polygamy
NDRU	Anemophilous flowers (Wind-fertilized)
NDT	Entomophilous flowers (Insect-fertilized)
NDTA	Irregularity
NDTE	Influence of color
NDTG	Guilding lines (Sprengel)
NDTI	Influence of odor
NDTL	Hydrophilous plants

NDTN	Nocturnal flowers
NDTO	Ornithophilous flowers (Bird fertilized)
NDU	Mechanical contrivances
NDX	Fruit. Seed
NDXA	Pericarp
NDXE	External accessions
NDXG	Simple fruits
NDXI	Aggregate fruits
NDXJ	Accessory (Anthocarpous) fruits
NDXM	Multiple fruits
NDY	Dry fruits
NDYD	Dehiscent (Pod. Legume. Pyxis)
NDYI	Indehiscent (Samara. Achena. Nut)
NDZ	Fleshy fruits
NDZD	Stone fruits (Drupe)
NDZP	Baccate fruits (Pome. Berry)
NE	Physiology
NEA	Cell and cellular tissue
NEAI	Imbibition
NEAO	Osmotic pressure. Diomosis <i>See also</i> NEBA
NEB	Stability of the plant body
NEBA	Turgor. Turgidity
NEBI	Tension of tissues
NEBM	Mechanical tissues (Stereome)
NEC	Nutrition. Food
NED	Absorption
NEDA	Mechanics of absorption
NEDG	Gases <i>See also</i> NER
NEDH	Oxygen
NEDI	Carbon dioxide
NEDJ	Nitrogen
NEDK	Ammonia
NEDS	Water
NEDT	Translocation of substances <i>See also</i> NEE
NEDV	Movement of gases
NEE	Distribution of water Flow of sap
NEEA	Root pressure
NEEF	Periodicity of flow
NEEI	Transpiration
NEF	Assimilation
NEFA	Autotropism. Heterotropism. Mixotropism

NEFF	Photosynthesis. Absorption of carbon
NEFG	Function of chlorophyll
NEFH	Accessory pigments
NEFJ	Products of Photosynthesis
NEFL	Chemosynthetic assimilation of carbon dioxide
NEFO	Assimilation of oxygen and hydrogen
NEFP	Assimilation of nitrogen
NEFS	Assimilation of organic food <i>See also</i> NFP
—	Respiration <i>See</i> NEJN
NEG	Metabolism
NEH	Organic compounds. Physiological chemistry <i>See also</i> OCO
NEHA	Proteids
NEHE	Enzymes (Ferments)
NEHG	Toxins and antitoxins
NEHJ	Pigments
NEHL	Carbohydrates. Glucosides, etc.
NEHO	Organic acids
NEI	Distribution of organic substances
NEIR	Reserve material
NEJ	Metabolic processes
NEJC	Constructive metabolism
NEJD	Non-nitrogenous substances
NEJF	Nitrogenous substances
—	Function of chlorophyll <i>See</i> NEFG
NEJK	Destructive metabolism
NEJL	Fermentation (Zymosis)
NEJN	Respiration
NEJO	Intramolecular
NEJQ	Anaerobic
NEJR	Effect of pressure
NEJT	Production of heat
NEJV	Movement of gases <i>See also</i> NEDV
NEJY	Action of bacteria
NEJZ	Phosphorescence. Light emitting plants
NEK	Metabolic products
NEKA	Plastic
NEKB	Aplastic
NEKH	Excretion
NEKI	Waste products
NEKM	Aromatic substances
NEKO	Coloring matters
NEKT	Toxic bodies
NEL	Supply and expenditure of energy
NELA	Influence of light
NELE	Influence of temperature
NELI	Dissipation of energy
—	Growth <i>See</i> NEM
—	Movement <i>See</i> NER

<b>NELO</b>	Evolution of light, heat, and electricity
<b>NEM</b>	Growth
<b>NEN</b>	Mechanics <i>See also</i> NES
<b>NEO</b>	Tension
<b>NEOA</b>	Influence on cellular growth
<b>NEOE</b>	Pressure. Traction
<b>NEP</b>	Embryonal development. Formation of new organs
<b>NEPA</b>	Germination. Seedlings
<b>NEPB</b>	Phase of elongation <i>See also</i> NRRV
<b>NEPC</b>	External influences on growth
<b>NEPD</b>	Mechanical force
<b>NEPE</b>	Light
<b>NEPF</b>	Heat
<b>NEPG</b>	Electricity
<b>NDPH</b>	Moisture
<b>NEPI</b>	Poisons
<b>NEPL</b>	Artificial metamorphism
<b>NEPM</b>	Rate of growth. Variation (Heterauxesis)
<b>NEPN</b>	Nutation <i>See also</i> NERW
<b>NEPS</b>	Periodicity
<b>NEPT</b>	Diurnal
<b>NEPV</b>	Winter rest
—	Action of gravity <i>See</i> NESG
<b>NEQ</b>	Irritability and movement
<b>NEQA</b>	Stimuli
	Mechanical
	Contact
<b>NEQD</b>	Pressure
<b>NEQE</b>	Shock
<b>NEQF</b>	Photic
<b>NEQG</b>	Tonic. Phototonus
<b>NEQH</b>	Auxanometer
<b>NEQI</b>	Etiolation
<b>NEQK</b>	Stimulative
<b>NEQM</b>	Heliotropism <i>See also</i> NESA
<b>NEQO</b>	Thermic
<b>NEQP</b>	Tonic. Thermotonus
<b>NEQR</b>	Stimulative
<b>NEQT</b>	Thermotropism <i>See also</i> NESK
<b>NEQU</b>	Electric
<b>NEQV</b>	Electrotropism <i>See also</i> NESL
<b>NEQW</b>	Chemic
<b>NEQX</b>	Transmission of stimuli
<b>NER</b>	Movement
<b>NERA</b>	Naked protoplasm

NERC	Amebold. Streaming <i>See also</i> Biology
NERE	Phototactic (Heliotactic)
NERF	Chemotactic
NERI	Protoplasm with cell walls
NERJ	Circulation
NERK	Rotation
NERL	Orientation
NERP	Hygroscopic movement
NERS	Movements of growth
NERT	Torsion
NERV	Elongation <i>See also</i> NEPR
NERW	Circumnutation. Revolving nutation <i>See also</i> NESGL
NES	Mechanism of growth movements
NESA	Heliotropism (Apotropism) <i>See also</i> NEQM
NESC	Transverse
NESG	Geotropism
NESGD	Diageotropism
NESGL	Lateral geotropism. Stem climbing <i>See also</i> NERW
NESH	Curvature of lignified tissues
NESJ	Hydrotropism
NESK	Thermotropism
NESL	Galvanotropism
NESN	Somatotropism
NESP	Rheotropism
NESR	Aerotropism
NEST	Traumatropism
NESV	Effect of slow rotation. Klinostat
NESX	Variation of light and temperature
NET	Movement of variation. Turgor changes (Periodic movement)
NETA	Autonomic variation
NETL	Paratonic variation
NETN	Nyctotropic movement (Sleep of plants)
NETS	Sensitive organs
NEU	Reproduction <i>See also</i> NCMR. NDN
	For reproduction in various groups of plants, use the group letters with NEU
NEV	Vegetative (Asexual. Blastemal)
NEVB	Budding
NEVS	Spore-formation
NEW	Sexual (Parturital)
NEWF	Fertilization. Pollination <i>See also</i> NDP
	Self and cross fertilization <i>See</i> NDPA, NDR

NEX	Hybridization. Cross-breeding <i>See also</i> Biology
NEXA	Mutation. Sports
NEXP	Alternation of generations
NEY	Distribution of seeds
NEYA	Air currents
NEYE	Water transportation
NEYH	Special methods
NEYI	Animals
NEYM	Mechanical devices
NEYX	Germination

## NF Oecology

### NFA Physiographic

NFB	Saprophytism. Saprophytes <i>See also</i> NDGU
NFC	Protection against drouth. Xerophytes. <i>See also</i> NORD
NFD	Protection against cold
NFE	Protection against animals
NFH	Carnivorous plants. Insectivorous plants <i>See also</i> NDJV
NFL	Symbiosis
NFP	Parasitism. Parasites <i>See also</i> NDGT, NEFS
NFQ	Mycorhiza
NFR	Epiphytes (Air plants) <i>See also</i> NDGP
NFT	Myrmecophilism. Acrophilism
NFW	Locomotion. Migration <i>See also</i> NEY, NGE

### NG Geographic

NGA	Phytographic regions
NGAD	DeCandolle's
NGAG	Griesbach's
NGAH	Humholdt's
NGC	Effects of climate
NGCA	Tropical
NGCE	Temperate
NGCI	Arctic
NGE	Intruded floras. Acciimatization
NGF	Climatic formations
NGFA	Woodland
NGFB	Grassland
NGFD	Desert <i>See also</i> NFC
NGG	Edaphic formations
NGH	Influence of telluric water
NGHA	Swamp vegetation. Marsh plants
NGHF	Halophytes
NGHM	Moors

NGJ	Open edaphic formations
NGJA	Rock plants
NGJD	Dune vegetation Beach plants
NGK	Prairie flora
NGKA	Mesophytic
NGKE	Xerophytic
—	Desert flora <i>See</i> NFC, NGFD
NGL	Mountain vegetation. Alpine plants
NGLC	Climatic factors
NGLK	Vertical zonation
NGM	Aquatic vegetation
NGN	Marine
NGG	Benthos
NGP	Plankton. With local list
NGR	Fresh water
NGS	Lakes
NGT	Benthos
NGU	Plankton. With local list
NGW	Rivers. Streams
NGZ	Snow and ice

## NH Geographical distribution. Phyto-geography. Local floras

For several reasons it seems best not to dissociate local floras from the cognate topics in Oecology. Mr. Cutter's plan, however, was to include Geographical distribution in Descriptive Botany. Hence provision has been made for its inclusion there (See NJ) for those who prefer to adopt this arrangement.

Small libraries may preferably use the Local List instead of the following subdivisions. Botanical libraries desiring a more minute subdivision will find it in Engler's *Syllabus der Pflanzenfamilien* (1907,) upon which the present arrangement is based. When used without the Local List NH will stand for general works on plant distribution.

NHA	Northern (Boreal) kingdom
NHAA	Arctic region
NHAN	Sub-arctic region
NHB	Middle European region
NHBA	Atlantis island ("Makaronesian" region)
NHC	Mediterranean region

NHD	Central Asiatic region
NHE	Temperate East Asiatic region
NHF	North American region
NHG	Pacific region
NHGC	Conifer province
NHGM	Rocky Mountain province
NHGP	Desert and prairie province
NHH	Atlantic region
NHHE	Lake province
NHHM	Mississippi and Alleghany province
NHHS	Southern Atlantic province
NHI	Prairie province
NHJ	Palaeotropical kingdom
NHK	North-African and Indian desert region
NHL	African forest and steppe region
NHM	Southwest Capeland
NHMA	South Atlantic islands
NHN	Malagasy region
NHO	Indian region
NHP	Monsoon region Tropical Himalaya, Malayan, Melanesian and Polynesian regions
NHPE	East Indian and Southern Japan region
NHQ	Sandwich Islands
NHR	Central and Southern American Kingdom
NHRM	Middle America (Xerophytic region)
NHS	Tropical America
NHT	Andean region
NHTG	Galapagos Islands
NHTJ	Juan Fernandez and Masofuera
NHU	Austral (Palaeoceanic) kingdom
NHV	South American austral-antarctic region

NHVK	Kerguelen Island
NHW	New Zealand region
NHX	Australian region
NHXA	Tristan da Cunha, St. Pauls and Amsterdam islands
NHZ	Oceanic kingdom (principally Algae)
NHZA	Boreal region
NHZE	Tropical region
NHZI	Austral region

## N I Local floras by phytographic divisions

Subdivide as in NN *et seq.* and use the local list, for the topography of each group, as:

- NLOA532 Algae of the Baltic Sea;
- NIPH21 Mushrooms of Australia;
- NINR84 Ferns of New England;
- NINS943 Conifers of Oregon

**NIZ** Plant biology (Origin of plants.)  
 General works only. For subdivisions see Biology.

**NJ** Phytography (Descriptive botany)

**NK** Geographical distribution. Phytogeography

Use the classification given under NH or the local list.  
 Thus: NKA Northern (Boreal) kingdom, NKJ Palaeotropical kingdom, etc. See note under NH.

## N L Local floras by phytogeographic divisions

Subdivide as in NN *et seq.*, and use the local list for the topography of each group, as: NLOA532 Algae of the Baltic Sea; NIPH21 Mushrooms of Australia, etc. See note to NH

NM Classification. Taxonomy		100%
NML	Linnean system	100%
NMN	Natural system	100%

## NMX Nomenclature

### NN Protophyta

NNA	Schizophyta <i>Fission fungi</i>	100%
NNB	Schizomyctes. <i>Bacteria.</i> See also MBV	100%
NNC	Eubacteria	100%
NND	Bacteriaceae (Bacterium, Bacillus) <i>Rod bacteria</i>	100%
NNE	Spirillaceae (Spirillum)	100%
NNF	Chlamydobacteriaceae (Cladotrich, etc) <i>Iron bacteria</i>	100%
NNG	Coccaceae (Micrococci, Streptococcus)	100%
NNH	Myxobacteriaceae	100%
NNI	Thiobacteria <i>Sulphur bacteria</i>	100%
NNJ	Beggiaeoaceae	100%
NNK	Rhodobacteriaceae <i>Purple bacteria</i>	100%
NNL	Schizophyceae (Cyanophyceae, Phycochlorinaceae) <i>Blue green algae</i>	100%
NNLC	Coccogoneae	100%
NNLH	Hormogoneae	100%
NNM	Myxomycetes <i>Or in OGH</i>	100%
NNMA	Acrasiales	100%
NNMP	Plasmodiophorales	100%
NNO	Myxogasteres	100%
NNOA	Ectosporeae	100%
NNOE	Eudosporeae	100%
NNR	Flagellata <i>Or in OGS</i>	100%

NNRA	Pantostomatinales
NNRD	Distomatinales
NNRG	Protomastigales
NNRI	Chrysomonadales
NNRK	Cryptomonadales
NNRL	Chloromonadales
NNRN	Euglenales
NNS	<i>Silicoflagellatae</i> Or in OGT
NNSP	<i>Siphonostales</i>
NNST	<i>Stereostales</i>
NNT	Peridiniae (Dinoflagellatae) Or in OGU
NNTG	Gymnodiniaceae
NNTM	Prorocentraceae
NNTP	Peridiniaceae
NNU	<i>Coccospores.</i> <i>Rhabdospheres</i>
NNV	Diatomeae (Bacillariales). <i>Diatoms</i>
NNVC	Centricae
NNVF	Pennatae
NNW	Conjugatae. <i>Desmids</i>
NNX	Heterocontae (Conferva)

## NNZ Cryptogamia

NoA	<i>Algae.</i> <i>Seaweeds</i>
Noc	Chlorophyceae. <i>Green algae</i>

NOD	Volvocales
NOE	Protococcales
NOF	Ulotrichales
NOG	Siphonocladiales
NOH	Siphonales
NOI	Charales <i>Stoneworts</i>
NOJ	Phaeophyceae <i>Brown algae</i>
NOK	Phaeosporeae
NOL	Cyclosporeae
NON	Dictyotales
NOR	Rhodophyceae (Florideae) <i>Red algae</i>
NOS	Bangiales
NOT	Florideae
NOTA	Nemalionales
NOTE	Gigartinales
NOTI	Rhodymeniales
NOTO	Cryptonemiales
Nov	Phycomycetes <i>Algae-fungi</i>
Now	Zygomycetes
NOV	Oomycetes
NP	Eumycetes (Mycomycetes) <i>Fungi</i> Mycology
NPA	Ascomycetes
NPB	Hemiascineae
NPC	Euascineae
NPCA	Protoascineae <i>Yeast fungi, etc.</i>
NPCB	Prctodiscineae
NPCD	Phacidiineae
NPCG	Protocaliciaceae
NPCI	Pezizineae
NPCK	Helvellineae

N <sub>P</sub> C <sub>L</sub>	Hysteriineae
N <sub>P</sub> C <sub>N</sub>	Tuberineae <i>Truffles</i>
N <sub>P</sub> C <sub>P</sub>	Plectascineae
N <sub>P</sub> C <sub>R</sub>	Perisporiineae
N <sub>P</sub> C <sub>T</sub>	Pyrenomycetineae
N <sub>P</sub> C <sub>V</sub>	Laboulbeniaceae

The following arrangement of Ascomycetes (Strasburger, 1908) may be used in place of the above, if preferred: Perisporiaceae NPA, Discomycetes NPD, Pyrenomycetes NPH, Tuberaceae NPK, Exoasci NPO, Sphaeromycetes NPS, Laboulbeniaceae NPV

N <sub>P</sub> D	Basidiomycetes <i>See also</i> NPK
N <sub>P</sub> E	Hemibasidii <i>Smuts</i>
N <sub>P</sub> E <sub>G</sub>	Ustilagineae
N <sub>P</sub> E <sub>L</sub>	Tilletineae
N <sub>P</sub> F	Eubasidii
N <sub>P</sub> G	Protobasidiomycetes
N <sub>P</sub> G <sub>E</sub>	Uredineineae
N <sub>P</sub> G <sub>H</sub>	Auriculariineae <i>Rusts</i>
K <sub>P</sub> G <sub>L</sub>	Tremellineae
N <sub>P</sub> H	Autobasidiomycetes <i>Mushrooms</i>
N <sub>P</sub> H <sub>D</sub>	Dacryomycetinaeae
N <sub>P</sub> H <sub>F</sub>	Tulasnellineae
N <sub>P</sub> H <sub>K</sub>	Exobasidiineae
N <sub>P</sub> I	Hymenomycetinaeae (Hymenomycetes)
N <sub>P</sub> J	<i>Gasteromycetes</i>
N <sub>P</sub> J <sub>A</sub>	Phallineae
N <sub>P</sub> J <sub>H</sub>	Hymenogastrineae
N <sub>P</sub> J <sub>L</sub>	Lycoperdineae
N <sub>P</sub> J <sub>N</sub>	Nidulariineae
N <sub>P</sub> J <sub>S</sub>	Sclerodermatineae

NPK	Fungi imperfecti
NPKA	Conidioformes
NPKC	Sphaeropsidales
NPKE	Melanconiales
NPKH	Hymomycetes
NPKM	Mycelioformes
NPL	Lichenes <i>Lichens</i>
NPLA	Ascolichenes (Discolichenes)
NPLC	Coniocarpineae
NPLG	Graphidineae
NPLJ	Discocarpineae
NPLP	Pyrenocarpineae
NPLS	Basidiolichenes
NPLT	Hymenolichenes

## NPM Archegoniatae (Cormophyta)

NPN	Bryophyta (Muscineae)
NPO	Hepaticae <i>Liverworts</i>
NPOA	Marchantiales
NPOB	Riccieae
NPOC	Corsineae
NPOF	Marchantieae
NPOH	Anthocerotales
NPOJ	Jungermanniales
NPOI	Anacrogynae
NPON	Acrogynae
NPOR	Calobryaceae
NPP	Musci <i>Mosses</i>
NPPA	Sphagnales (Stegocarpae)

N PPE	Andreaeales (Schizocarpae)
N PPI	Phascales (Cleistocarpae)
N PRO	Bryales (Bryinae)
N PPR	Acrocarpi
N PPU	Pleurocarpi

If Fleischer's arrangement of the Bryales is followed the marks will be: Arthrodontei, NPPG; Elasmodontei, NPPR; Amphodontei, NPPS; Archodontei, NPPT

NQ	Pteridophyta (Vascular cryptogams)
NR	Filicales <i>Ferns</i>
NRA	Rusporangiatae
NRB	Ophioglossales
NRC	Marattiales
NRE	Leptosporangiatae
NRF	Filices <i>True ferns</i>
NRH	Hydropteridae <i>Water ferns</i>
NRK	Sphenophyllales
NRM	Equisetales
NRN	Euequisetales
NRO	Calamariales
NRQ	Lycopodiales. <i>Club-mosses</i>
NRR	Lycopodiineae
NRS	Psilotineae
NRT	Selaginellineae
NRU	Lepidophytineae <i>Lepidodendron</i>
NRV	Isoëtineae
NRX	Cycadofilices (Pteridospermeae)

**NRZ Spermatophyta (Phanerogamia. Siphonogamia)**

Ns	Gymnospermae
Nsa	Cycadales <i>Cycads</i>
Nsb	Bennettitales
Nsc	Cordaitales
Nsg	Ginkgoales (Ginkgoales)
Nsk	Coniferae <i>Conifers</i>
Nsm	Taxaceae
Nsp	Pinaceae
Nst	Gnetales
Nt	Angiospermae (Metaspermiae)
Nu	Monocotyledoneae
Nua	Pandanales
Nub	Helobiae (Fluviales)
Nuc	Potamogetonineae
Nud	Alismatineae
Nue	Butomineae
Nuf	Triuridales
Nug	Glumiflorae <i>Grasses. Sedges</i>
Nuh	Gramineae
Nui	Cyperaceae (Carices)
Nuj	Principes (Palmae) <i>Palms</i>
Nuk	Synanthae
Nul	Spathiflorae (Spadiciflorae)
Num	Fariuosae
Nump	Flagellariineae
Nun	Enantioblastae
Nuo	Bromeliineae
Nup	Commelinineae
Nuq	Pontederiineae

NUR	Philydrineae
NUS	Liliiflorae
NUT	Juncineae
NUU	Liliineae
NUV	Iridineae
Nuw	Scitamineae
NUX	Microspermae
NUY	Burmanniineae
NUZ	Gynandrae <i>Orchids, etc.</i>
Nv	Dicotyledoneae
NVA	Archichlamydeae (Apetales)
Nvc	Verticillatae
NVD	Piperales
NVE	Salicales (Saliciflorae)
NVG	Myricales
Nvh	Balanopsidales
Nvi	Leitneriales
Nvj	Juglandales
Nvk	Batidales
NTL	Julianiales
NVM	Fagales ( <i>Querciflorae in part</i> )
NVN	Urticales
NVP	Proteales
Nvs	Santalales (Hysterophyta)
Nvt	Santalineae
Nvu	Loranthineae
Nvv	Balanophorineae
Nvw	Aristolochiales (Hysterophyta <i>in part</i> )
Nvx	Polygonales

Nw	Mesachlamydeae (Choripetalae)
NWA	Centrospermae
NWAC	Chenopodiinae
NWAE	Phytolaccineae
NWAI	Portulacineae
NWAO	Caryophyllineae
NWB	Ranales (Polycarpicae)
NWBA	Nymphaeineae
NWBD	Trochodendrineae
NWBH	Ranunculineae
NWBM	Magnoliineae
Nwc	Rhoeadales
Nwca	Rhoeadineae
Nwcc	Cappardineae
Nwcj	Resedineae
Nwcm	Moringineae
Nwd	Sarraceniales (Insectivorae)
Nwe	Rosales (Saxifraginae. Rosiflorae)
Nwea	Podostemonineae
Nwek	Saxifragineae
Nwer	Rosineae
Nwf	<i>Leguminosineae</i>
Nwg	Geraniales (Gruinales)
Nwgg	Geraniineae
Nwgm	Malpighiineae
Nwgp	Polygalineae
Nwgr	Dichapetalineae
Nwgt	Triococcae
Nwi	Sapindales (Celastrales)

NWIB	Buxineae
NWIE	Empetrineae
NWIH	Coriariineae
NWIL	Limnanthineae
NWIN	Anacardiineae
NWIP	Celastrineae
NWIR	Icacineae
NWIS	Sapindineae
NWIT	Sabiineae
NWIV	Melanthineae
NWIW	Balsamiineae
NWL	Rhamnales (Frangulinae)
NWM	Malvales (Columniferae)
NWME	Elaeocarpineae
NWMH	Chlaenineae
NWMM	Malvineae
NWMS	Scytopetalineae
NWP	Parietales (Cistiflorae. Passiflorineae)
NWPA	Theineae
NWPD	Tamaricineae
NWPF	Fouquierineae
NWPH	Cistineae
NWPK	Cochlospermineae
NWPM	Flacourtiineae
NWPN	Papayneae
NWPR	Loasineae
NWPT	Datiscineae
NWPV	Begoniineae
NWPX	Ancistrocladinae

Nws	Opuntiales
NWT	Myrtiflorae (Thymelaeinae)
NWTA	Thymelaeinae
NWTE	Myrtineae
NWTH	Hippuridineae
NWTK	Cynomoriineae
NWU	Umbelliflorae
Nx	Metachlamydeae (Sympetalae. "Monopetalae")
Nxa	<i>Pentacycliae</i>
Nxb	Ericales
Nxd	Primulales
Nxe	Ebenales (Diospyrineae)
NxeA	Sapotinae
Nxed	Diospyrineae
Nxh	<i>Tetracycliae</i>
Nxi	Contortae
Nxia	Oleinae
Nxid	Salvadorinae
Nxig	Gentianinae
Nxk	Tubiflorae (incl. Personatae)
Nxka	Convolvulinae
Nxkb	Borragininae
Nxkd	Verbeninae
Nxkg	Solaninae
Nxkj	Acauthinae
Nxkm	Myoporinae
Nxkr	Phrymiae
Nxn	Plantaginales
Nxr	Rubiaceae

NxT	Campanulatae
NxTA	Cucurbitineae
NxTC	Campanulineae
NxU	<i>Aggregatae</i>
NxV	Dipsacaceae
NxW	Compositae

## NY Sylvae Trees Shrubs

General works only. Works on individual families, genera or species will go in Phytography (NJ) as: Conifers Nsk; Palms NuJ. Fruit trees go in RII. For local sylvas use Ny with the local list.

## Palaeobotany

See Geology for general works. Descriptions of individual fossil forms will go in their respective places in Phytography.

## Nyz Phytopathology

Most books on this subject will go RIT.

NyzG	Galls
NyzN	Necrobiosis

## Nz Economic and Medical botany

General works only. For vegetable products see RHH and RI. For timber and forestry see RJ. Medical botany will consist, generally speaking, of descriptive treatises on plants which are useful in medicine (see also QCA) and also on poisonous plants.







# ZOOLOGY

Classification made by Mr. Richard Bliss, Librarian of the Redwood Library, Newport, R. I.

## SYNOPSIS

General works O

Generalia O·1-O·9

Biologic zoology OA

Morphology OB

Skeletography OBA-OBK

Splanchnography OBKZ-OBW

Histology OBX-OBZ

Physiology OC

Physiological chemistry OCO-OCZ

Reproduction, Embryology OD

Oekology OE

Adaptation, etc. OEQ-OEZ

Descriptive zoology OG-PT

Economic zoology PU

Anthropology PV-PZ

## Preliminaries and Generalities

- O·1 Study of Zoology
- O·2 Bibliography of Zoology
- O·3 Biography of Zoologists
- O·4 History of Zoology
- O·5 Dictionaries
- O·6 Tables, Handbooks, etc.\*
- O·7 Periodicals
- O·8 Society publications†
- O·9 Collections of works by several writers

## O Comprehensive and miscellaneous works

### O1 Classification and nomenclature. Taxonomy

O11 } Museums, Zoological gardens, Parks, etc.  
to O99 } Arranged by local list

OA·1 } Preliminaries of biologic zoology, like O·1 to O·9  
to OA·9 } If not put in O·1 to O·9

### OA ZOOLOGY (BIOLOGIC) comprehensive works

Will include "Comparative Anatomy and Physiology"

#### OAB Collecting technique. Collecting and preserving

OABA Plankton apparatus and methods

OABE Planktonokrit

OABI Insects

OABK Apparatus for rearing caterpillars. Breeding cage

OABO Birds

OABU Birds' eggs and nests

#### OAC Preserving technique

OAD Skeletal preparations

\*When "Handbook" or "Manual" means merely a short general treatise on zoology it goes in O

†A society publication relating to one topic of zoology goes under its appropriate head

OAE	Examining and preserving media
OAF	Bleaching fluids
OAFD	Decalcifying fluids
OAG	Clearing agents
OAH	Decolorizing and differentiating solutions
OAHF	Dissociating fluids
OAI	Injection
OAI C	Corrosive methods
OAJ	Injection masses
OAK	Taxidermy
OAL	Preservation of collections
OAM	Microscopical technique
OAN	Microscope (General optical principles)
	For a special zoological library; In a general library OAN to OAW should go in M, Biology
OANE	Lenses
OANO	Microscope stands
OANU	Microscope accessories
OAO	Drawing cameras
OAP	Microtomes
OAQ	Slides, labels, cones, etc.
OAR	Fixing, hardening, and preserving agents. Fixatives
OARA	Theory of preservatives. "Fixation"
OARE	Acids
OARI	Salts
OARO	Mixtures
OARU	Formaldehyde
OARY	Alcohol as a fixative
OAS	Stains and staining
OASA	History of stains and staining technique
OASE	Carmines
OASI	Haematoxylins
OASL	Anilines
OASO	Staining in toto
OASU	Staining on slide
OASY	Double and multiple staining
OAT	Imbedding and sectioning
OATA	Paraffine
OATI	Paraffine ovens
OATO	Imbedding
OATU	Sectioning

OAU	<b>Mounting</b>
OAUC	Cements and varnishes
OAUT	Cell mounts
OAV	<b>Special methods of technique for each class of objects</b>
OAVA	Cytologic methods
OAVC	Zoologic methods
OAW	<b>Methods of study of serial sections</b>
OAWA	Drawing. ( <i>See OAS</i> )
OAWE	Interpretation by "reading through"
OAWI	Reconstruction
OAWO	Wax models (Bonn's method)
OAWU	Millimetre paper
OAWY	Other methods
OAX	<b>Kinetoscopic technique</b>
OAY	<b>Dissection</b>
OAYI	<b>Vivisection</b>  The ethics of vivisection go in BQZ
OAZ	<b>Zoochemistry.</b> <i>See Physiological chemistry under Physiology</i>  Better in organic chemistry  Comparative Anatomy and Physiology will be included in OA. For human anatomy and physiology <i>See Q</i>
OB	<b>Morphology. Comparative Anatomy</b>
OBB	<b>Protoplasmic structure. Cellular structure</b>
OBBR	Protoplasm
OBBB	Plasmodium
OBBC	Ectosarc and Endosarc
OBBD	Vacuole
OBBE	Permanent
OBBF	Contractile
OBBG	Gastric (Food vacuole)
OBBI	Nuclei
OBBL	Amœboid processes
OBBG	Pseudopodia. Tube-feet, Tentacle, Cilia
OBBP	Supporting and protective structures. <i>See also OBE</i>
OBBQ	Stalk
OBBR	Cellular wall
OBBG	Shell
	<i>See also OBFL, OBFT</i>
OBBT	Chitinous
OBBU	Calcareous
OBBV	Silicious
OBBY	Cuticle

OBC	Multicellular structure
OBCA	Somatic system
OBCB	Germinal layers
OBCC	Ectodermal structure
OBCD	Endodermal structure
OBCE	Mesodermal structure
OBCF	Body. Body-wall
OBCG	Cephalic region
OBCGP	Prostomium
OBCH	Thoracic region
OBCI	Cephalo-thorax. Collum
OBCJ	Abdominal region
OBCK	Caudal region
OBCL	Cormus. Personae cormorum
OBCM	Antimere and metamere
	Muscular system <i>See</i> OBD
OBCN	Body cavity
OBCO	Cœlom
OBCOA	Proto-cœlom
OBCOC	Syncœlom
OBCOD	Episplanchnic
OBCOE	Pericardiac
OBCOF	Epinephric
OBCOG	Gonocœl
OBCP	Hæmocœl
OBCPH	Phlebœdesis
OBCQ	Integument, Dermoskeleton ↓ Cellular membrane
OBCR	Derma (Cutis. Corium)
OBCS	Hypoderma
OBCT	Epidermis. Cuticle. Exoskeleton
OBCU	Epithelium

OBCW	Dermal and epidermal structures
OBCX	Scales
OBCXA	Shields. Plates. Scutes
OBCXE	Warts. Callosities
OBCY	Hair. Bristles
OBCYA	Hair succession
OBCYE	Hair slope and hair whorls
OBCYF	Spine. Prickles
OBCVH	Horns, Hoofs
OBCYN	Nails. Claws. Onchium. Empodium
OBCYP	Fin-Rays
OBCYR	Rattles
OBCZ	Mammary pocket. Marsupium Pigment cells <i>See OBVX</i> Scent glands <i>See OBPGSC</i>

### OBD Myography. Myology

OBD	Myography. Myology
OBDA	Muscular system
OBDB	Muscle bands and fibers
OBDD	Voluntary muscles
OBDE	Muscle plate muscles
OBDF	Somatopleural. (Vextro-axial)
OBDG	Nephromeric. (Hyperaxial. Hyposkeletal)
OBDK	Visceral. (Splanchnopleural)
OBDL	Musculature
OBDM	Dermal
OBDN	Dermo-muscular tube
OBDO	Dorso-ventral
OBDP	Dorso-lateral
OBDQ	Ventral
OBDR	Protractor and Retractor
OBDS	Myomeric. (Myocomma. Myotome)
OBDT	Antimeric
OBDV	Muscles of particular parts and organs, as:
OBDVD	Diaphragm
OBDVI	Intercostal, etc.
OBDW	Myological formulae
OBDX	Abnormalities <i>See OECT</i> Musculature of particular animals Arr. as in systematic list

### OBE Supporting and defensive structures

*See also OBBP*

OBF	Skeletal system. Osteology
OBFA	Exoskeleton ( <i>General</i> )
OBFE	Endoskeleton ( <i>General</i> )
OBFC	Horny fibers
OBFE	Spicules (Megascleres. Microscleres, etc.)
OBFF	Stercom

<b>OBFH</b>	Calcareous plates
<b>OBFI</b>	Oral armature
<b>OBFJ</b>	Spines
<b>OBFL</b>	Shell  <i>See also</i> OBHS
<b>OBFM</b>	Calcareous
<b>OBFN</b>	Silicications
<b>OBFR</b>	Internal shell
<b>OBFT</b>	Chitinous skeleton. Test  <i>See also</i> OBHT
<b>OBFU</b>	Apodermal system. Apodema
<b>ORFW</b>	Cartilaginous skeleton
<b>OBG</b>	Osseous (and cartilaginous) skeleton
<b>OBH</b>	Axial
<b>OBHA</b>	Vertebral column (Back-bone)
<b>OBHC</b>	Centrum
<b>OBHE</b>	Notochord
<b>OBHH</b>	Haemal arch
<b>OBHI</b>	Neural arch
<b>OBHK</b>	Cervical region
<b>OBHL</b>	Buccal skeleton. Mouth parts  <i>See also</i> OBLK
<b>OBHN</b>	Thoracic region. Thorax
<b>OBHO</b>	Branchial skeleton
<b>OBHP</b>	Lumbar region
<b>OBHQ</b>	Sacral and caudal regions. Tail
<b>OBHR</b>	Ribs
<b>OBHS</b>	Sternum
<b>OBII</b>	Cephalic skeleton (Cranium. Skull)
<b>OBIA</b>	Chondro-cranium
<b>OBIB</b>	Basilar plate
<b>OBID</b>	Osseous bone-case
<b>OBIE</b>	Occipital segment
<b>OBIF</b>	Parietal segment
<b>OBIG</b>	Frontal segment
<b>OBIH</b>	Pre-frontal
<b>OBII</b>	Post-frontal
<b>OBIK</b>	Basilar portion
<b>OBIL</b>	Presphenoid
<b>OBIM</b>	Basisphenoid
<b>OBIN</b>	Parasphenoid
<b>OBIO</b>	Vomer
<b>OBIP</b>	Facial apparatus
<b>OBIQ</b>	Palatine
<b>OBIR</b>	Sense capsules
<b>OBIS</b>	Olfactory
<b>OBIT</b>	Ocular
<b>OBIU</b>	Auditory
<b>OBIS</b>	Squamosal

OBIV	Visceral bars
OBIW	Mandibular arch. Jaws. Teeth
OBIWQ	Quadrata bone
OBIX	Hyoid arch
OBIY	Branchial arch
	Pectoral arch <i>See</i> OBKO
	Pelvic arch <i>See</i> OBKV
OBJ	Appendicular skeleton. Appendages
OBJA	Unpaired appendages
OBJB	Proboscis. Trunk
OBJC	Rostrum. Beak <i>See also</i> OBLKO
OBJD	Haustellum. Antlia
OBJE	Sucking mouth. Tongue <i>See also</i> OBLKA
OBJF	Polypite
OBJG	Arachnidium
OBJH	Sting. Ovipositor
OBJI	Caudal spine (Telson)
OBJK	Median (vertical) fins Tail <i>See</i> OBHQ
OBJM	Paired appendages
OBJN	Cephalic region
OBJO	Gnathite (Mandibular apparatus)
OBJP	Mandible
OBJQ	Maxillae. Palps
OBJR	Pedipalps
OBJS	Labrum. Palp
OBJU	Foot-jaws
OBJX	Antennae. Antennules <i>See also</i> OBSBH
OBJY	Ophthalmite (Eye-stalk)
OBJZ	Thoracic, Abdominal and Pelvic regions
OBK	Limbs. Feet
OBKA	Invertebrate limbs
OBKB	Thoracic appendages
OBKC	Abdominal appendages
OBKD	Endopodite. Exopodite
OBKE	Swimming paddles. Pleopods
OBKF	Parapodia
OBKH	Podia. Feet
OBKI	Plantula
OBKJ	Pulvillus
OBKK	Wings
OBKL	Tegmina. Elytra

OBKM	Vertebrate limbs (Fore and hind limbs)
OBKN	Thoracic
OBKO	Shoulder girdle
OBKP	Pectoral fins
OBKQ	Wings
OBKR	Fore limbs
OBKS	Carpus
OBKU	Pelvic
OBKV	Pelvic girdle. Pelvis
OBKW	Ventral fins
OBKX	Hind limbs
OBKY	Tarsus

## OBKZ Splanchnography

OBL	Alimentary system
OBLA	Alimentary tract
OBLB	Digestive cavity. Digestive sac
OBLC	Adipose body. Fat body
OBLE	Enteric canal. Digestive tube
OBLF	Enteron (Primitive gut)
OBLG	Archenteron (Coelenteron)
OBLH	Neurenteric canal
OBLI	Prosenteron
OBLJ	Gastric pouches and canal
OBLK	Buccal cavity. Mouth <i>See also</i> OBLH
OBLKA	Tongue <i>See also</i> OBLE
OBLKE	Salivary gland
OBLKI	Horny plates (Baleen)
OBLKO	Beak <i>See also</i> OBJC
OBLL	Masticatory apparatus
OBLLA	Jaws (Invertebrate)
OBLLE	Aristotle's lantern
OBLLI	Modified feet
OBLLO	Masticatory plates
OBLLU	Odontophore. Radula
OBLM	Jaws (Vertebrate) Teeth (Dentition, Odontography)
OBLMP	Palatine teeth
OBLN	Dental formulae
OBLNA	Modified mandibles and maxillae

<b>OBLO</b>	<b>Stomodœum</b>
<b>OBLP</b>	Pharynx
<b>OBLPA</b>	Pharyngonasal cavity
<b>OBLPC</b>	Pharyngooral cavity
<b>OBLPI</b>	Pharyngolaryngeal cavity
<b>OBLPO</b>	Pharyngeal teeth
<b>OBLQ</b>	Thymus gland
<b>OBLR</b>	Thyroid gland. Accessory thyroid gland
<b>OBLRH</b>	Hypobranchial groove. Endostyle
<b>OBLS</b>	Oesophagus. Oesophagus and stomach (Fore gut)
<b>OBLSA</b>	Gizzard. Mastax. Trophi
<b>OBLSC</b>	Crop
<b>OBLSI</b>	Sucking stomach
<b>OBLSO</b>	Bile duct
<b>OBLT</b>	Enteron. Gastric cavity. Stomach
<b>OBLU</b>	Proventriculus
<b>OBLV</b>	Ventriculus
<b>OBLW</b>	Flagellated chamber
<b>OBLX</b>	Gastric gland
<b>OBLZ</b>	Mid gut
<b>OBM</b>	Mesenteron
<b>OEMA</b>	Liver
<b>OBMB</b>	Digestive gland
<b>OBMC</b>	Gall-bladder and duct
<b>OBME</b>	Pancreas
<b>OBMG</b>	Pyloric tract
<b>OBMH</b>	Spiral fold. Spiral valve
<b>OBMJ</b>	Pyloric appendages
<b>OBML</b>	Villi
<b>OBMM</b>	Metenteron. Intestinal canal
<b>OBMN</b>	Small intestine
<b>OBMO</b>	Large intestine. Colon
<b>OBMP</b>	Cæca
<b>OBMQ</b>	Intestinal glands
<b>OBMR</b>	Hind gut
<b>OBMS</b>	Proctodœum
<b>OBMT</b>	Rectum
<b>OBMU</b>	Rectal gland
<b>OBMV</b>	Cloaca
<b>OBMW</b>	Urogenital sinus
<b>OBMX</b>	Anus
<b>OBMY</b>	Anal glands. Bursa fabricii
<b>OBMZ</b>	Alimentary system : by classes, etc.

**OBN**      Vascular system. (Circulatory system)

**OBNA**      Water-vascular system

*See also OBPA*

**OBNB**      Canals (Excretory capillaries)

**OBNC**      Canal system

**OBNCK**      Ring canals

**OBNCM**      Madreporite. Stone canal

**OBNCR**      Radial canals. Tube-feet canals

**OBND**      Polian vesicles

**OBNE**      Tiedmann's vesicles

**OBNF**      Ambulacral appendages

**OBNG**      Pseudo-haemal system

**OBNH**      Radial and circular sinuses

**OBNI**      Sub-neural canals

**OBNJ**      Haemal (Lacunar) system. Blood-vascular system

**OBNK**      Haemocel

**OBNL**      Lacunar system

**OBNM**      Lateral and transverse vessels. Lemnisci

**OBNN**      Dorsal vessel (Dorsal heart) and Pericardial sinus

**OBNO**      Closed blood-vascular system

**OBNP**      Heart

**OBNPB**      Branchial

**OBNPC**      Accessory (Caudal)

**OBNQ**      Arteries

**OBNR**      Capillaries

**OBNS**      Veins

**OBNT**      Retia mirabilia

**OBNU**      Lymphatic system. Ductless glands

**OBNV**      Lymphatics. Lacteals

**OBNW**      Spleen

**OBNX**      Suprarenal capsule, Adrenal gland

Thyroid and Thymus gland *See OBLQ, OBLR*

**OBNZ**      Vascular system : by classes, etc.

**OBO**      Respiratory system

**OBOA**      Dermal pores

**OBOC**      Coelomic cavity

**OBOCB**      Bursae

**OBOCD**      Dermal tracheæ (Papulae)

**OBOCN**      Stewart's organ

**OBOCR**      Respiratory tree (Water lung.) Cuvierian organ

<b>OBOD</b>	Branchial system
<b>OBOE</b>	Accessory intestine (Siphon)
<b>OBOR</b>	Branchiae intestine
<b>OBOG</b>	Branchiae. Gills. Gill chamber
<b>OBON</b>	Ctenidia
<b>OBOI</b>	Branchial lamellæ (Respiratory plate)
<b>OBOR</b>	Siphon. Siphuncule
<b>OBOK</b>	Ambulacral gills
<b>OBOL</b>	Lung-book. Gill-book
<b>OBOM</b>	Pulmonary sac
<b>OBON</b>	Atrial (peribranchial) chamber
<b>OBOP</b>	Adaptive gills
<b>OBOPA</b>	Ambulacral gills
<b>OBOPF</b>	Foot gills (Podobranchiae, Arthrobranchiae, Pleurobranchiae)
<b>OBOPN</b>	Anal gills
<b>OBOR</b>	Tracheo-branchiae
<b>OBOS</b>	Tracheal system
<b>OBOT</b>	Tracheæ
<b>OBOTA</b>	Tubular. Stigmata
<b>OBOTE</b>	Tracheal gills. Tracheal lungs
<b>OBOU</b>	Pulmonary system
<b>OBOV</b>	Air bladder
<b>OBOW</b>	Air sac
<b>OBOK</b>	Lungs (Air-breathing vertebrate)
<b>OBOS</b>	Respiratory system: by classes, etc.
<b>OBP</b>	Excretory system
<b>OBPA</b>	Water-vascular system
<b>OBPB</b>	Tubes and capillary vessels
<b>OBPC</b>	Excretory pores
<b>OBPD</b>	Flame cells
<b>OBPE</b>	Water lungs <i>See OBOCK</i>
<b>OBPG</b>	Glands. Exclusive of those entered in OBL, OBN, OBP, OBU. Arranged alphabetically, as :
<b>OBPGA</b>	Antennary
<b>OBPGC</b>	Coxal
<b>OBPGF</b>	Foot
<b>OBPGO</b>	Oil
<b>OBPGP</b>	Purple

OBPGSC	Seent. Seent organ
OBPGSH	Shell
OBPGSL	Slime
OBPGW	Wax. Honey dew
OBPI	Ink sac
OBPM	Malpighian tubes. Malpighian vessels
OBPO	Organ of Bojanus (Kidney)
OBPS	Weber's organ Urinary organs <i>See</i> OBUA
OBPZ	Excretory system : by classes, etc.
OBQ	Nervous system
OBQA	Radial type. Oral and apical system
OBQB	Symmetric bilateral type
OBQC	Bilateral type (Vertebrates)
OBQD	Sensory cells
OBQE	Ganglia
OBQF	Nerves and nerve centers
OBQG	Afferent (Sensory)
OBQGN	Nerve endings <i>See also</i> Histology (OBZM)
OBQH	Efferent (Motor)
OBQHN	Nerve endings
OBQI	Sensori-motor
OBQJ	Reflex
OBQK	Inhibitory
OBQL	Vaso-motor
OBQLA	Vaso-constriector
OBQLE	Vaso-dilator
OBQN	Seeretary
OBQNA	Mammary
OBQO	Ganglia
OBQOE	Sporadic ganglia
OBQP	Ganglionic system
OBQQ	Ganglionic cells and fibrillae
OBQR	Peripheral system
OBQS	Oral nervous system
OBQT	Apieal nervous system

OBQT	Cerebral ganglionic system
OBQUA	Cerebral organ "Brain"
OBQUE	Sensory lobes and organs
OBQV	Ventral cord. Ventral ganglionic chain
OBQVG	Giant nerve tube
OBQVK	Thoracic ganglionic mass
OBQW	Dorsal nerve cord
OBQX	Nervous system
OBQXA	Oesophageal
OBQXE	Visceral
<b>OBR</b>	<b>Cerebro-spinal system (Myelencephalon)</b>
OBRA	Notochord
ONRB	Spinal cord (Myelon. Medullary tube)
OBRC	Spinal nerves
OBRD	Encephalon. Brain
OBRE	Cortex
ORRF	Fissures. Sulci
OBRG	Prosencephalon (Telencephalon. Fore-brain. Cerebrum)
OBRH	Rhinencephalon (Olfactory lobes, Olfactory tubes)
OBRI	Thalamencephalon (Diencephalon, Tween-brain, Thalami-optici)
OBRIJ	Pineal body. Pineal eye
OBRK	Mesencephalon (Mid-brain)
OBRL	Epencephalon (Hiud-brain)
OBRM	Cerebellum
OBRN	Pons Varolii
OBRO	Metencephalon (After-brain. Medulla oblongata)
OBRP	Electric lobe
OBRQ	Ventricles
OBRR	Cerebral commissures
OBRS	Cranial (Cerebral) nerves
OBRT	Cerebro-spinal ganglia
<b>OBRV</b>	<b>Sympathetic system</b>
OBRW	Ganglia and plexuses
OBRX	Nerves and nerve centres
<b>OBS</b>	<b>Organs of special sense</b>
OBSA	General and undetermined. Arranged alphabetically, as:
OBSAC	Calceoli
OBSAF	Frontal sensory organs
OBSAL	Leydigian organs
OBSAP	Pallial sensory organs
OBSAPE	Pectines
OBSAS	Sphaeridia
OBSASU	Sub-radular organ
OBSB	Tactile organs

OBSBA	Tactile-cells and corpuscles
OBSBB	Tactile rods, cones, feelers
OBSBC	Tactile setae, bristles, hairs
OBSBG	Ambulacral spines and appendages
OBSBH	Antennae and Antennulae. <i>See also OBHZX</i>
OBSBI	Anal cerci
OBSBJ	Proboscidium
OBSBL	Integumentary sense organs. <i>See also OBZM</i>
OBSBM	Nerve eminences
OBSBN	End buds and bulbs
OBSBP	Tactile cells
OBSBR	Club-shaped corpuscles
OBSBT	Lateral line organ
OBSC	Olfactory and Gustatory organs
OBSCA	Olfactory pits. Ciliated pits.
OBSCE	Olfactory setae
OBSCE	Olfactory antennal and filaments (Feelers)
OBSCH	Osphradium
OBSCK	Goblet-shaped bodies
OBSCO	Organ of Jacobson
OBSD	Nose
OBSF	Tongue. Taste buds
OBSF	Ocular organs
OBSG	Stigmata. Pigment spots. Red eye-spot
OBSH	Optic pits
OBSI	Ocelli. Ocellicysts
OBSJ	Tentacular eye (Vesicular eye)
OBSK	Refractory organ. Eye
OBSL	Mantle eye
OBSM	Median (unpaired) eye.) Omatidium
OBSN	Compound (facetted) eye
OBSO	Lateral eye
OBSPE	Auditory organs
OBSQ	Auditory vesicle. Auditory sac
OBSR	Tentaculocyst (Acoustic tentacle)
OBSSE	Auditory setae
OBSST	Otocyst and Otolith
OBSU	Chordotonal organ
OBSV	Tympanal organ
OBSW	Weberian apparatus
OBSX	Ear
OBSY	Auditory labyrinth
OBSZ	Semicircular canals
OBT	Nervous system : by classes, etc.

## OB<sub>U</sub> Urinogenital system

### OB<sub>UA</sub> Renal organs. Urinary organs

OB <sub>UB</sub>	Nephridia
OB <sub>UC</sub>	Pronephros (Head kidney)
OB <sub>UD</sub>	Mesonephros (Wolffian body)
OB <sub>UE</sub>	Segmental ducts Mullerian duct <i>See</i> OB <sub>VG</sub> Wolffian duct <i>See</i> OB <sub>VI</sub>
OB <sub>UF</sub>	Metanephros (Kidney)
OB <sub>UG</sub>	Metanephric duct. Ureter
OB <sub>UK</sub>	Urinary bladder
OB <sub>UP</sub>	Urethra

### OB<sub>V</sub> Reproductive organs

OB <sub>VA</sub>	Genital (germinal) glands <i>See also</i> ODBA
OB <sub>VB</sub>	Hermaphrodite gland
OB <sub>VC</sub>	Female genital glands
OB <sub>VA</sub>	Gonads
OB <sub>VC</sub>	Gonadial tube
OB <sub>VI</sub>	Ovary. Ova
OB <sub>VC</sub>	Viteline (yolk) gland
OB <sub>VD</sub>	Male genital glands
OB <sub>VS</sub>	Spermatidia
OB <sub>VT</sub>	Testis. Spermary
OB <sub>VE</sub>	Efferent (genital) ducts and glands
OB <sub>VEA</sub>	Gonophore
OB <sub>VED</sub>	Renal funnel
OB <sub>VEG</sub>	Genital cord (Mullerian and Wolffian duct)
OB <sub>VF</sub>	Female ducts and glands
OB <sub>VG</sub>	Oviduct (Ovarian tube, Ovariule, Mullerian duct, Fallopian tube)
OB <sub>VGA</sub>	Oviduct gland. Oviduct capsule
OB <sub>VGE</sub>	Receptaculum ovarum
OB <sub>VGI</sub>	Laurer's canal
OB <sub>VI</sub>	Male ducts and glands
OB <sub>VI</sub>	Sperm duct (Wolffian dnet, Vas deferens)
OB <sub>VJ</sub>	Specialized efferent ducts and glands
OB <sub>VJA</sub>	Ovisac
OB <sub>VJE</sub>	Bursal pocket. Bursæ
OB <sub>VJI</sub>	Brood pouch. Brood cavity. Ephippium
OB <sub>VK</sub>	Uterus. Uterus tube
OB <sub>VL</sub>	Vagina
OB <sub>VLC</sub>	Vaginal cæcum

<b>OBVM</b>	Receptaculum seminis
<b>OBVMA</b>	Albuminous gland
<b>OBVME</b>	Cement (Colleterial) gland
<b>OBVMI</b>	Shell gland. Nidamental gland
<b>OBVMO</b>	Accessory gland
<b>OBVMU</b>	Perineal sac and gland
<b>OBVN</b>	Spermatheca
<b>OBVNA</b>	Spermatophore capsule, pouch, sac
<b>OBVO</b>	Vesiculae seminales
<b>OBVP</b>	Prostate gland
<b>OBVQ</b>	Urogenital sinus
<b>OBVR</b>	Copulatory organs Vagina. <i>See</i> OBVL
<b>OBVS</b>	Bursa copulatrix
<b>OBVT</b>	Vulva
<b>OBVU</b>	Intromittant organ (Penis, Cirrus)
<b>OBVV</b>	Accessory organ of copulation
<b>OBVVA</b>	Clitoris
<b>OBVVE</b>	Spiculum amoris
<b>OBVVI</b>	Organs for seizing and clasping
<b>OBVVO</b>	Integumentary processes and folds
<b>OBVW</b>	Transformed limbs and appendages
<b>OBVX</b>	Hectocotylized arm
<b>OBVY</b>	Ventral fin appendages
<b>OBVZ</b>	Anal fin
<b>OBW</b>	Urinogenital system, by classes

## **OBX** Histology

<b>OBXA</b>	Cell Most of the books on this topic will go in Biology.
<b>OBXB</b>	Cell development
<b>OBXC</b>	Morphology (particular kinds of cells) Arr. alphabetically, as:
<b>OBXCA</b>	Amoeboid
<b>OBXCC</b>	Ciliated
<b>OBXCE</b>	Collared
<b>OBXCF</b>	Flagellate
<b>OBXCG</b>	Goblet
<b>OBXD</b>	Primary germinal layer. Body wall
<b>OBXE</b>	Ectoderm (Epiblast) Ectosarc
<b>OBXF</b>	Endoderm (Endoblast) Endosarc
<b>OBXG</b>	Mesoderm (Mesoblast) Mesoglia

<b>OBXH</b>	<b>Tegumentary (cutaneous) tissue</b>
OBXJ	Derma (Corium, Cutis vera)
OBXK	Epidermis. Perisarc (Cuticle)
OBXK	Epidermal glands
OBXKA	Sudoriparous
OBXKE	Sebaceous
OBXL	Epidermal structures (Appendages)
OBXM	Exoskeletal
OBXMA	Shell
OBXME	Test
OBXMI	Scales
OBXMO	Plates
OBXN	Appendicular
OBXNA	Rhabdites
OBXNE	Nails, Claws, Hoofs, etc.
OBXNI	Hair, Setae, Bristles
OBXNO	Feathers
OBXO	Epithelial tissue. Membrane
OBXP	Epithelium
OBXQ	Endothelium
OBXR	Cement substance
OBXS	Simple epithelium
OBXSA	Pavement (Squamous)
OBXSE	Columnar
OBXSI	Goblet
OBXSO	Glandular
OBXSU	Ciliated
OBXT	Stratified epithelium
OBXTA	Keratin
OBXTE	Prickle cells
OBXU	Transitional
OBXV	Pigment epithelial cells
OBXW	Particular membranes. Arr. alphabetically, as:
OBXWA	Basement
OBXWE	Hyaloid
<b>OBY</b>	<b>Specialized tissue</b>
OBYA	Neuro-epithelial
OBYB	Glandular
OBYC	Secreting glands. Arranged alphabetically, as
OBYCB	Biliary
OBYCG	Gastric
OBYCI	Intestinal

OBYCL	Lacrymal
OBYCM	Mammary
OBYCP	Pancreatic
OBYCR	Repugnatorial
OBYCS	Salivary
	Sebaceous. <i>See O BXKE</i>
OBYCT	Sperm
OBYCU	Urinary (Kidney)
OBYD	Ductless glands
OBYE	Suprarenal (Adrenal)
OBYF	Thymus and Thyroid
OBYG	Spleen
OBYH	Foetal membrane
OBYI	Chitin (Entomolin)
OBYK	Connective tissue
OBYL	Corpuscles
OBYLA	Granule
OBYLE	Pigment. Pigment cells
OBYLI	Plasma
OBYM	Connective tissue membrane
OBYMA	Mucous
OBYME	Serous
OBYMI	Synovial
OBYN	Mucous tissue
OBYO	Gelatinous
OBYP	Retiform (Reticulate)
OBYQ	Adenoid (Lymphoid)
OBYR	Areolar. Intersitial
OBYS	Adipose. Fat body
OBYT	Fibrous
OBYTA	White. Tendinous
OBYTI	Yellow elastic
OBYTO	Fenestrated membrane
OBYU	Cartilaginous. Cartilage
OBYV	Hyaline
OBYW	Fibro-cartilage
OBYWA	White
OBYWE	Yellow
OBYX	Chondrin
OBYY	Calcified
	Temporary <i>See O BIZC</i>

OBZ	Osseous tissue (Bone and Dentine)
OBZA	Osteoid
	Exoskeletal structures (Scales, Plates, etc.) See OBXMI, OBXMO
OBZB	Bone corpuscles
OBZBA	Epiphyses and Apophyses
OBZEE	Periosteum
OBZBI	Marrow
OBZBO	Haversian system
OBZC	Temporary cartilage
OBZD	Dentine. Ivory
OBZE	Enamel
OBZF	Muscular tissue
OBZFA	Non-striated (Unstriped)
OBZFE	Striated (Striped)
OBZFI	Cardiac
OBZG	Nervous tissue
OBZH	Gray (Cineritious)
OBZHA	Ganglion corpuscles
OBZHE	Neuroglia
OBZI	White (Fibrous)
OBZIA	Medullated fibers
OBZIE	Axis cylinder
OBZII	Medullary sheath
OBZIO	Neurilemma (Primitive sheath)
OBZIU	Non-medullated fibers
OBZIY	Gray (Gelatinous)
OBZJ	Cerebro-spinal system
OBZK	Nerves
OBZL	Cerebro-spinal
OBZLA	Afferent (Sensory)
OBZLE	Efferent (Motor)
OBZM	Peripheral termination (Nerve endings)
OBZMA	Fibrillae
OBZMC	End organs. End bulbs
OBZMG	Tactile corpuscles
OBZMK	Pacinian corpuscles
OBZMN	Neuro-tendonous spindles
OBZMP	Neuro-muscular spindles
OBZMR	Motorial end-plates
OBZN	Sympathetic
OBZNM	Nerves of muscles
OBZO	Ganglia
OBZP	Spinal cord
OBZQ	Encephalon. Brain

OBZR	Vascular tissue
OBZRA	Arteries
OBZRE	Capillaries
OBZRI	Veins
OBZRO	Lymphatics
OBZRP	Lymphatic glands
OBZS	Liquid tissue
OBZT	Blood
OBZU	Plasma. Serum
OBZV	Blood corpuscles
OBZVA	Red
OBZVE	Colorless (Leucocytes)
OBZVI	Phagocytes
OBZVO	Blood platelets
OBZVU	Crystals
OBZW	Lymph
OBZX	Chyle
OBZY	Reproductive tissue
OBZZ	Tokocytes. Reproductive glands
OBZZA	Ova
OBZZE	Sperms. Primitive male cells
Oc	Physiology
OCA	General topics
OCAB	Vitalism. "Vital force"
OCAC	Neovitalism
OCAD	Conditions of life
OCAE	Vital processes and functions. Vital mechanics
OCAF	Spontaneous activity
OCAG	Irritability. Transmission of stimuli
OCAH	Stimuli <i>See also</i> OCGP
OCAI	Directive
OCAJ	Mechanical
OCAK	Chemical. Chemotaxis
OCAL	Photic. Phototaxis
OCAM	Colored light
OCAN	Thermic. Thermotaxis
OCAO	Electric
OCAF	Specific energy
OCAQ	Inhibition <i>See also</i> OCHF
OCAR	Complexity of function
OCAS	Change of function

OCAT	Metabolism <i>See also</i> OCOM
OCAU	Anabolism
OCAV	Catabolism
OCAW	Metabolism of muscle
OCB	<b>Cellular physiology</b>
OCBA	Protoplasm
OCBV	Pigment and color
OCBC	Chlorophyll (Other pigments arranged alphabetically, as OCBCA, etc.)
OCBD	Color changes
OCBE	Ectoderm and Endoderm
OCBF	Mesoderm
OCBV	Vascular system
OCBH	Cellular mechanics
OCBL	Physiology of the tissues
OCBM	Muscular energy
OCBN	Muscular mechanics and physics. Myodynamics
OCBO	Formation, growth and degeneration. Histogenesis and Hystolysis
OCBR	<b>Physiology of the skin</b>
OCBT	Cutaneous respiration <i>See</i> OCDS
OCBU	Cutaneous absorption
OCBX	Cutaneous secretion
OCC	Ecdysis (Moulting)
OCCA	Alimentation. Alimentary system
OCCB	Imbibition. Absorption
OCCC	Ingestion
OCCD	Mastication. Insalivation. Deglutition
OCCD	Digestion. Assimilation
OCCF	Intracellular
OCCG	Enteric (Enteric cavity and canal)
OCHG	Gastric
OCHI	Intestinal
OCHI	Saliva and Gastric juice
OCHJ	Bile
OCHK	Pancreatic juice
OCL	Chyle
OCEM	Metabolism <i>See</i> OCAT, OCOM
OCCR	Increment. Growth. <i>See also</i> ODG
OCCR	Intra-uterine nutrition
OCCV	Lactation

<b>OCD</b>	<b>Circulation (Vascular system)</b>
OCDA	Coelomic fluid
OCDB	Water
OCDC	Blood
OCDD	Action of the heart
OCDF	Hæmolymp
OCDG	Lymph
OCDH	Chyle
OCDI	Splenic circulation
OCDJ	Fœtal circulation
<b>OCDK</b>	<b>Respiration</b>
	Hæmoglobin and its compounds <i>See OCDQ, OCTA</i>
OCDM	Production of carbon dioxide
OCDN	Branchial respiration
OCDP	Tracheo-branchial respiration
OCDQ	Tracheal respiration
OCDR	Pulmonary respiration
OCDS	Localized respiration
<b>OCDV</b>	<b>Animal heat</b>
OCDW	Diurnal variation
OCDY	"Cold-blooded" animals
<b>OCE</b>	<b>Secretion (and Excretion.) Physiology of the glands</b>
OCEA	Physical processes
OCEC	Chemical processes
OCEE	External secretion
OCEF	Mucous
OCEG	Sebaceous
OCEH	Sudoriferous (Sweat)
OCEI	Internal secretion
OCEJ	Salivary
OCEK	Gastric and intestinal
OCEN	Pancreatic
OCEO	Fecal
OCER	Renal (Urine)
OCES	Mammary (Milk)
OCEU	Serous and Synovial
OCEV	Lachrymal
OCEX	Poison (Venom)
	Sperm <i>See ODEI</i>

<b>Ocf</b>	<b>Physiology of the Ductless glands</b>
Ocfa	Suprarenal (Adrenal) capsules
Ocfe	Thymus
Ocfi	Thyroid and Parathyroid
Ocfo	Spleen
<b>OCG</b>	<b>Nervous system. Physiology of nerve and muscle</b>
Ocga	Nerves
Ocgb	Nerve cell
Ocgc	Neuron theory. Neurones
Ocgd	Afferent
Ocge	Efferent
Ocgf	Association
Ocgg	Peripheral fatigue
Ocgh	Wallerian degeneration
Ocgn	Nerve impulse and conductivity
Ocgp	Stimuli. <i>See also</i> Ocah
Ocgs	Electric phenomena. <i>See also</i> Ocj
Ocgt	Tonic activity (Tonus)
Ocgw	Muscular excitability and contractility
Och	Function of the nervous system
Ocha	Ganglia. Nerves and nerve centers
Ochb	Motor impulse
Ochc	Reflex action
Ochd	Automatic action
Oche	Accelerating action
Ochf	Inhibitory action. <i>See also</i> Ocaq
Ochg	Coordination of movement
Ochi	Equilibrium
Ochi	Vaso-motor action
Ochj	Secretory action
Ochk	Intercommunication
Ochl	Functions of nerve roots
Ochn	Central system (Cerebro-spinal system)
Ocho	Spinal cord
Ochp	Spinal nerves and centers
Ochq	Encephalon
Ochqa	Cerebral hemispheres
Ochqb	Cerebral cortex
Ochqc	Cerebellum
Ocbqe	Pons Varolii

Oenqh	Medulla oblongata
Oehr	Cranial nerves and centers
Oerts	Sympathetic system
Oernt	Ganglia
Oehw	Sympathetic nerves and centers
Oer	Peripheral system
Oera	Afferent nerves
Oerb	Sensory
Oerc	Reflex
Oerd	Inhibitory
Oere	Sensori-motor
Oeig	Efferent
Oehr	Motor. <i>See also Ockm</i>
Oeri	Inhibitory
Oeij	Vaso-motor
Oek	Secretory
Oeil	Trophic
Oem	Sensory phenomena. Sensation (Treated topically)
Oein	Peripheral
Oeinp	Peripheral for semi-circular canals
Ocio	Muscular. Kinesthetic
Ocip	Cutaneous
Ocipa	Pressure
Ocipe	Temperature
Ociq	Lateral-line function
Ocir	Special sense organs
Ocis	Taste and smell
Ocrit	Sight
Ocriu	Color sensation
Ociv	Hearing
Ocivw	Labyrinthine sense
Ocix	Function of Otoliths
Ocj	Electro-physiology
Ocja	Muscle
Ocje	Electric organ
Ocje	Nerve
Ocjf	Sensory organs
Ock	Generation. Reproduction. <i>See also Od, Qbu, and Biology.</i> Most of the works on this subject will go in Od
Ocka	Genital organs and apparatus
Ockb	Oestruation (Rut)
Ockc	Copulation. Sperm induction
Ockch	Hypodermic impregnation

OCE	Physiology of the embryo. Gestation Intranterine nutrition and circulation. <i>See</i> Occu, Ocdj
OCKI	Parturition
OCKL	Lactation
OCKM	Motor phenomena. Locomotion. <i>See also</i> Ocih, Orc
OCKN	Amœboid movement. Artificial amœba. <i>See also</i> Odfb
Ocko	Euglenoid movement
Ockp	Ciliary movement
Ockq	Pseudopodial movement
Ockr	Muscular contraction
Ocks	Swimming. Floating
Ockt	Flying. Phenomena of flight.
Ockw	Walking. Running. Crawling
Ocl	Miscellaneous physical phenomena
Ocla	Photogeny
Ocll	Light perception
Oclp	Phototropism
Oclq	Heliotropism
Ocm	Dormant vitality. Torpor
Ocma	Sleep
Ocmb	Diurnation
Ocmd	Dessication rigor
Ocmf	Cold and heat rigor
Ocmh	Hibernation. Aestivation
Ocn	Sound production
Ocna	Voice, Speech, etc.
Ocne	Song
Ocni	Sounds other than vocal
Ocno	Stridulation
Oco	Physiological chemistry
Ocoa	Chemical composition of the animal body
Ocob	Chemical methods
Ococ	Chemical processes
Ocoe	Synthetic
Ocoo	Analytic
Ocoh	Hydrolysis
Ocoi	Oxidation
Ocoj	Reduction
Ocom	Metabolism. <i>See also</i> Ocav
Ocor	Osmosis
Ocos	Colloids

Ocov	Anastates
Ocow	Catastates
Ocp	Proteids
OCPA	Physiological properties
OCPB	Composition
OCPG	Synthesis
OCPD	Simple proteids
OCPF	Albuminoids
OCPF	Native
OCPG	Egg albumin
OCPH	Serum albumin
OCPI	Lact albumin
OCPJ	Paralbumin
OCPK	Derived
O CPL	Acid albumin
OCPM	Syntonin
OCPN	Alkali albumin
OCPQ	Casein
OCPQ	Globalins
OCPR	Egg globulin
O CPS	Crystallin
O CPT	Vitellin
O CPV	Paraglobulin (Serum globulin)
O CPV	Fibrinogen
O CPW	Myosinogen
O CPX	Myosin
O CPY	Globin
O CQ	Fibrins
O CQA	Coagulated
O CQB	By heat
O CQC	By ferment
O CQD	Proteoses
O CQE	Albumoses
O CQG	Globuloses
O CQH	Vitelloses
O CK	Keratoses
O CQL	Peptones
O CQN	Compound proteids
O CQO	Hæmoglobin (Hæmoglobulin) <i>See also O CQL, OCTA</i>
O CQP	Gluteo-proteids
O CQQ	Mucin. Mucoids
O CQR	Nucleo-proteids
O CQS	Nucleic acid
O CQT	Nucleones

OcqW	Lardacein
OcqX	Lecithin-albumen
Ocr	<b>Collagens</b>
Ocra	Collagen
Ocrb	Gelatin
Ocrc	Chondrin
Ocre	Elastin
Ocrk	Keratin
Ocrm	Neurokeratin
Ocrn	Chitin
Ocrp	Protamines
Ocrq	Hystidin
Ocrs	Argenin
Ocrs	Lycin
O crt	Proteid compounds with acids, halogens, etc.
Ocs	<b>Enzymes</b>
Ocsa	Properties (Physical and chemical)
Ocsb	Action
Ocsc	Catalytic phenomena
Ocse	Special action
Ocsf	Proteolytic
Ocsg	Amylolytic
Ochs	Oxydative
Ocsi	Coagulative
	Particular enzymes
Ocsj	Ptyalin
Ocsk	Pepsin
Ocsl	Trypsin
Ocsm	Trypsinogen
Ocsn	Piajin
Ocso	Rennin
Ocsp	Fibrin ferment
Ocsq	Urea ferment
Ocsr	Muscle enzyme
Ocst	Kinases
Ocsta	Enterokinase
Ocste	Erpepsin
Ocsu	Zymogens
Ocsv	<b>Toxins and Antitoxin</b>
Ocsw	Toxins
Ocsx	Antitoxins
Ocsy	Toxon and Toxoid
Ocsz	Immunity

**OCT**      **Coloring matters. Pigments**

OCTA	Hæmoglobin and its derivatives. <i>See also OCTL, OCQO</i>
OCTB	Hæmochromogen
OCTC	Hæmatin
OCTD	Hæmin
OCTE	Hæmoeyanin
OCTH	Chlorophyll
OCTI	Bile Pigments
OCTJ	Bilirubin
OCTK	Biliverdin
OCTN	Urinary pigments
OCTO	Urobilin
OCTP	Melanin
OCTR	Retinal pigments
OCTS	Fusein (Retinal melanin)
OCTT	Lipochrin
OCTU	Chromophanes
OCTV	Visual purple
OCTW	Lipochromes
OCTX-Z	[Other pigments]

**OCU**      **Carbohydrates**

OCUA	Glucoses
OCUB	Monoses
OCUC	Pentoses
OCUD	Hexoses
OCUE	Mannose
OCUG	Glucose. Dextrose
OCUJ	Galactose (Cerebrose)
OCUL	Lævulose (Fructose)
OCUP	Heptoses
OCUR	Octoses
OCUT	Nonoses
OCV	Disaccharids (Sugars)
OCVA	Saccharose (Cane sugar)
OCVC	Lactose (Milk sugar)
OCVF	Maltose
OCVH	Mycose (Trehalose)
OCVL	Trisaccharids
OCVM	Melitose
OCVP	Polysaccharids (Starches)
OCVS	Starch (Amylum)
OCVR	Glycogen (Animal starch)

OCVU	Carbohydrate derivatives
OCVW	Glucosides
OCUX	Glycuronic acid
OCVY	Glycosamin
OCW	Fatty acids. Fats and derivatives
OCWA	Acetic acid series
OCWB	Acetic acid
OCWC	Formic acid
OCWD	Butyric acid
OCWE	Valeric (Valerianic) acid
OCWG	Stearic acid. Adipocere
OCWI	Oleic acid
OCWK	Neutral fats
OCWL	Stearin
OCWO	Olein
OCWP	Glycerin
OCWR	Glycolic acid series
OCWS	Lactic acid
OCWT	Sarcolactic acid
OCWU	Hydroxy-butyric acid
OCWW	Oxalic acid series. <i>See also</i> OCYY
OCWX	Oxalic acid
OCWY	Succinic acid
OCX	Complex nitrogenous fats. Phosphorized fats
OCXA	Lecethin
OCXC	Cholin
OCXF	Neurin
OCXI	Protagon
OCXL	Cerebrin
OCXO	Jecorin
OCXR	Charcot's crystals
OCXS	Alcohols .
OCXT	Cholesterin
OCY	Amido-acids. Amides
OCYA	Acetic series
OCYB	Glycin
OCYC	Sarkosin
OCYD	Taurin
OCYE	Kreatin
OCYF	Kreatinin
OCYG	Leuciu

OCHH	Lactic series
OCHT	Cystin
OCHJ	Oxalic series
OCHJA	Aspartic acid
OCHJC	Carabamic acid
OCHL	Uric acid group
OCHM	Urea
OCHN	Uric acid
OCHO	Oxaluric acid
OCHP	Allantoin
OCHR	Xanthin group
OCHS	Xanthin and derivatives
OCHT	Heteroxanthin
OCHU	Paraxanthin
OCHV	Carnin
OCHW	Sarkin (Hypoxanthin)
OCHX	Adenin
OCHY	Guanin
OCHZ	Nitrogenous bases
OCHA	Protomaines
OCHB	Ptomaines
OCHC	Leucomaines
OCHD	Bile acids
OCHF	Cholaie (Cholic) acid and derivatives
OCHG	Glycocholic
OCHH	Taurocholic
OCHJ	Aromatic compounds
OCHK	Hippuric acid
OCHL	Tyrosin
OCHM	Kyneurenic
OCHN	Phenol
OCHO	Kresol
OCHP	Indol
OCHQ	Indoxyl-sulphuric acid
OCHX	Foods
OCHY	Animal
OCHZ	Vegetable
OD	Auxology (Reproduction. Embryology) <i>See also OCK</i> <i>QBU and Biology</i>
ODA	Reproduction
ODAC	Reproductive cells

ODAE	Asexual reproduction (Agamogenesis)
ODAF	Fission. Schizogony
ODAG	Gemmation (Budding)
ODAH	Discontinuous
ODAI	Continuous
ODAL	Internal. Gemmules
ODAN	Proliferation. Strobilation
ODAO	Zoids
ODAP	Parthenogonidia
ODAR	Colony formation
ODAS	Sporulation. Sporogenesis
ODAT	Encystment
ODB	Sexual reproduction (Gamogenesis)
ODBA	Genital gland (Germ gland. Gonad) <i>See also OBVA</i>
ODBC	Gametogeny (Gametes)
ODBD	Ovum. Ovogenesis
ODBE	Spermatozoa. Spermatogenesis
ODBF	Dimorphic spermatozoa
ODBG	Maturation
ODBH	Ovulation
ODBI	Secretion of sperm
ODBK	Conjugation. Impregnation. Fertilization
ODBL	Zygote
ODBM	Germinal continuity
ODBN	Reducing process Hypodermic impregnation <i>See OCCH</i>
ODBO	Oviposition. Spawning <i>See also OEG</i>
ODBP	Egg case
ODBR	Oviparity. Oviparous animals
ODBT	Ooviviparity. Ooviviparous animals
ODBV	Viviparity. Viviparous animals
ODBW	Viviparous insects
ODBX	Viviparous fishes
ODC	Sex. Sexual differentiation
ODCA	Sex determination
ODCE	Androrhropy (Male preponderance)
ODCI	Complemental males
ODCO	Secondary sexual characters
ODCP	Form and structure
ODCR	Color

ODCU	Hermaphroditism. For abnormal hermaphroditism <i>See OCT and QNF</i>
ODCW	Parthenogenesis
ODCX	Theletoky
ODD	Alternate generation (Heterogensis, Cyclic reproduction)
ODDA	Geneagenesis
ODDC	Metagenesis
ODDH	Heterogamy
ODDL	Pædogenesis
ODDP	Dissogeny
ODDS	Seasonal. Winter and summer eggs
ODDV	Resting eggs
ODDW	“Xenogenesis”
ODE	Embryology <i>See also Biology</i>
ODEA	Segmentation
ODEB	Blastulation. Blastula
ODEC	Gastrulation. Gastrula
QDED	Differentiation of layers and organs
ODEE	Gastrea theory
ODEF	Ectoderm
ODEG	Endoderm
ODEH	Mesoderm. Mesenchyme
ODEI	Blastopore
ODEJ	Body cavities. Somatic system
ODEK	Histogenesis
ODEM	Morphogenesis (Particular parts)
ODEO	Organogenesis (Particular organs)
ODEP	Alimentary system
ODEQ	Circulatory (Vascular) system
ODER	Respiratory system
ODES	Secretory
ODET	Nervous system
ODEU	Urinogenital system
ODEUD	Descent of the testis

O <sub>DEV</sub>	Vestigial structures. Rudimentary organs
	Recapitulation theory <i>See Biology</i>
	Van Baers law <i>See Biology</i>
	Larval stages <i>See ODL</i>
O <sub>DF</sub>	Experimental embryology. Developmental mechanics
O <sub>DF</sub> A	Self differentiation
O <sub>DF</sub> B	Protoplasmic mechanics <i>See also OCKN</i>
O <sub>DF</sub> C	Isolation of the blastomeres
O <sub>DF</sub> D	Periodic susceptibility
O <sub>DF</sub> H	Formative (directive) stimuli
O <sub>DF</sub> I	Pressure. Gravity
O <sub>DF</sub> J	Agitation
O <sub>DF</sub> K	Influence of temperature
O <sub>DF</sub> L	Influence of light
O <sub>DF</sub> M	Influence of heat
O <sub>DF</sub> N	Influence of electricity
O <sub>DF</sub> O	Influence of chemical agents
O <sub>DF</sub> P	Experimental morphogenesis
O <sub>DF</sub> P <sub>M</sub>	Merogeny
O <sub>DF</sub> Q	Artificial fertilization
O <sub>DF</sub> R	Experimental parthenogenesis
O <sub>DF</sub> S	Partial embryos
O <sub>DF</sub> T	Experiments on larvae
O <sub>DF</sub> U	Hybrids
O <sub>DF</sub> W	Production of sex
O <sub>DF</sub> X	Production of caste
O <sub>DF</sub> Y	Bisection. Grafting
O <sub>DG</sub>	Post-embryological development (Ontogenesis. Growth)
O <sub>DH</sub>	Metamorphosis
O <sub>DH</sub> A	Progressive (Anabolic)
O <sub>DH</sub> E	Retrogressive (Catabolic. Retrograde)
O <sub>DH</sub> I	Suppressed
O <sub>DI</sub>	Insect metamorphosis
O <sub>DI</sub> G	Gradual
O <sub>DI</sub> H	Incomplete (Hemimetabole)
O <sub>DI</sub> M	Complete (Holometabole)
O <sub>DI</sub> N	Larva
O <sub>DI</sub> P	Pupa
O <sub>DI</sub> Q	Imago

ODIT	Hypermetamorphosis
ODJ	Dimorphism
ODJA	Sexual
ODJE	Seasonal
ODJI	Hydroidform (Hydroid, Trophozoid)
ODJO	Medusoid (Medusæ, Gonozoid)
ODK	Polymorphism
ODKA	Caste <i>See also</i> ODFX
ODL	Larval stages
ODLA	Parasitic larvae <i>See also</i> OEL
ODLE	Oestrus cycle
ODM	Individual Arranged by class family or species, as:
ODMH	Hydrozoa
ODMI	Planula
ODMJ	Actinula
ODMM	Ephausidae
ODMN	Nauplius
ODMP	Protozoaea
ODMS	Saculina
ODMT	Nauplius
ODMU	Cypris
	An alternative arrangement is by the name of larva alphabetically, as:
ODMC	Cypris
ODMN	Nauplius
ODMP	Planula
ODN	Pupal stages. Except Insects, for which see ODIP
ODO	Post-larval growth
ODOA	Premature development
ODEE	Arrested development
ODOI	Excess of development
ODOS	Specialization
ODP	Development of particular structures. Arranged as in Morphology (OB) or Physiology (OC)
ODQ	Degeneration
ODQA	Modification of parts
ODQB	Degenerate eyes
ODQE	Reduction and loss of parts. Atrophy
	Vestigial structures. Rudimentary organs <i>See</i> ODEV
ODQG	Lost parts
ODQL	Degenerate forms
ODQO	Histolysis

ODQF	Phagocytes. Phagocytic organ
ODQS	Imaginal fold (Imaginal disc)
ODR	Regeneration
ODRA	Autotomy and regeneration. Regnlation
ODRB	Appendages
ODRE	Pupae
ODRI	Merogony and regeneration
ODRO	Cephalic
ODRU	Heteromorphle
ODS	Regeneration of particular parts and organs
ODSL	Limbs
ODT	Regeneration in particular classes
ODU	Resorption. Absorption (Involution)
ODUA	Absorption and transformation
ODUC	Resorption of hydranth
ODV	Senescence and Rejuvenescence
ODW	Longevity
ODX	Life history. Life cycle (In particular animals.) Arranged alphabetically or by classes

## OE Oekology (Ethology Bionomics)

OEA Habits. Arranged alphabetically, as :

OEAA	Boring
OEAB	Burrowing
OEAC	Carnivorous
OEAD	Death-feigning
OEAM	Myrmecophilous
OEAN	Swimming
OEAP	"Palolo" mode of life
OEAR	Habits of particular animals
	Hibernation <i>See</i> OEMN

## OEB Habitats

OEBA	Subterranean. Cavernicolous animals <i>See also</i> OGAC
OEBB	Bathybial (Abyssal) <i>See also</i> OGAI
OEBC	Plankton <i>See also</i> OGAF
OEBC	Marine
OEBC	Fresh-water

**OEC**            **Locomotion and attachment**    *See also OCKM*

<b>OECA</b>	Tentacular
<b>OECB</b>	Tube-feet
<b>OECF</b>	Pneumatophore (Float)
<b>OECH</b>	Auophore (Air-bell)
<b>OECN</b>	Nectophore (Swimming-bell)
<b>OECO</b>	Epipodia
<b>OECR</b>	Suckers. Sucking-feet
<b>OECT</b>	Byssus
<b>OECW</b>	Peduncle. Stalk

**OED**            **Defense. Protection and undetermined functions**

<b>OEDA</b>	Spines
<b>OEDB</b>	Pediellariae
<b>OEDU</b>	Aviculariae
<b>OEDV</b>	Vibraculae
<b>OEF</b>	Mimicry. Protective resemblance <i>See also OEWI and Biology</i>
<b>OEFA</b>	Protective coloration
<b>OEFF</b>	Pseudomimicry
	Experimental variation <i>See Biology—Heredity</i>
<b>OESFO</b>	Parallel forms (Inidental resemblance)
<b>OEFU</b>	Ornamentation
	Ecdysis (Exuviation. Moulting) <i>See OEBX</i>
<b>OEG</b>	Oviposition <i>See also ODBO</i>
<b>OEGA</b>	Cecidology (Galls)
<b>OEGR</b>	Resistance (Resistivity)
<b>OEGS</b>	Endurance of drought
<b>OEGT</b>	Endurance of starvation
<b>OEH</b>	Social life. Social relations
<b>OEHA</b>	Sexual relations
<b>OEHB</b>	Sex recognition
<b>OEHC</b>	Courtship. Mating
<b>OEHIP</b>	Parental relations
<b>OEHIQ</b>	Care and protection of young. Philostorgy
<b>OEI</b>	Commensalism. Symbiosis
<b>OEIA</b>	Mutualistic (Mutualism. Consortism)
<b>OEIC</b>	Contingent (Helotism. Serfdom)

OEJ	Antagonistic. Parasitism <i>See also</i> ODLA, OWZ
OEJA	Acariosis
OEJC	Coccidiosis
OEJG	Gregarinosis
OEJI	Haemosporidiosis
OEJM	Myxosporidiosis
OEJS	Sarcosporidiosis
OEJX	Ectoparasitism (Ectozoa)
OEJY	Endoparasitism (Endozoa)
OEJZ	Hyperparasitism
OEK	Social symbiosis
OEKA	Inquiliney
OEKE	Myrmecophily. Termitophily
OEKI	Camerisocialism
OEKO	Gregarious life
OCKU	Swarming
OEKY	Colony formation
OLE	Animal industries
OEIA	Hunting. Capture
OEIE	Food-storing
OEIO	Cell-making. Honey
OEM	Homes. Housing
OEMA	Tube-building
OEMD	Webs. Web-weaving
OEMN	Nests. Nest-making
OEMT	Temporary shelters (Larvarium, etc.)
OEN	Animal psychology
OEO	Instinct
OEOR	Orientation
OEP	Migration
OEPII	Homing
OEPK	Consciousness
OEPPL	Conscious automatism
OEPS	"Psychic" functions and phenomena
OEPW	Animal ethics
OEPZ	Variation, Adaptation, etc. <i>See also</i> Biology
OEQ	Variation
OEQA	Seasonal

OEQB	Seasonal dimorphism and trimorphism
OEQE	Sexual
OEQF	Sexual dimorphism
OEQG	Pairing variation
OEQK	Unisexual
OEQL	Individual
OEQM	Heterophagie
OEQP	Discontinuous
OER	Color variation
OERA	Seasonal color changes <i>See also OESP</i>
OERE	Albinism and Melanism
OERO	Larval
OES	Substantive
OESA	Size and form
OESC	Polymorphism
OESD	Proportion of parts
OESF	Dimorphism
OESG	Macropterism and Brachyurism
OESH	Variation in wings
OESM	Meristic
OESP	Superficial characters <i>See also OERA</i>
OESQ	Orthogenetic
OEST	Parthenogenetic
OESW	Dimorphic females
OET	Teratological. Teratology
OETA	Hemiteraties
OETB	Anomalies of form (Dwarfs and giants)
OETC	Abnormalities
OETD	Sinistral whorling
OETE	Ribbing
OETF	Abnormal larvae
OETJ	Abnormalities of parts as:
OETK	Cranium
OETL	Antlers
OETM	Dentition
OETN	Muscles, etc.
OETR	Reduplication and absence of parts
OETS	Polydactylism
	Albinism and Melanism <i>See OERE</i>
OETV	Heterotaxis (Transposition of viscera)
OETX	Gynandromorphism. Hermaphroditism
OETZ	Monstrosities

OEU	Homology <i>See also</i> Biology
OEUA	Serial
OEUC	Antimeric
OEUK	Special (i. e. particular organs and parts)
OREUT	Analogy <i>See also</i> Biology
OEV	Adaptation, Convergence, etc.
OEW	Adaptation
OEWA	Benthonic
OEWE	Planktonic
OEWI	Mechanical
OEWO	Local
OEWP	Adaptation to local color <i>See also</i> OEF
OEWW	Convergence <i>See also</i> Biology
OEX	Hexiology (Environment effects)
OEXA	Mechanical (Gravity, Atmosphere, Pressure)
OEXB	Physical (Light and darkness. Temperature)
OEXC	Chemical
ODXF	Food. Diet. Food relations
OEXG	Carnivorous phenomena (among herbivorous animals)
OEXJ	Confined space
OEXL	Currents of water
OEXN	Action of wind
OEXP	Climate. Phænology
	Migration <i>See</i> OER
OEXX	Extinction of races
OEV	Hybridity <i>See</i> Biology for subdivisions
	Heredity <i>See</i> Biology
	Aetiology <i>See</i> Biology
OEZ	Animals in relation to man
OEZA	Useful animals. Pets
OEZE	Noxious animals. Pests <i>See also</i> Agriculture
OEZM	Menageries

## SYNOPSIS

### O G Descriptive zoology

OGA	Geographical zoology
OGE	Invertebrata
OGF	Protozoa
OGZ	Metazoa
OH	Porifera
OHY	<i>Enterozoa</i>
OHZ	<i>Radiata</i>
OI	Coelenterata
OIS	Ctenophora
OIZ	<i>Coelomata</i>
OJ	Echinodermata
OJZ	<i>Vermes</i>
OK	Platyhelmia
OKS	Nemertea
OKT	Nemathelmia
OL	Trochelmia
OM	Mollusca
ON	Annelida
OP	Polyzoa
OQ	Brachiopoda
OQT	Chaetognatha
OR	Arthropoda
ORF	Myriapoda
ORN	Arachnida
OT	Crustacea
OTV	Chilopoda
Ou-ow	Hexapoda (Entomology)
Owx	Economic entomology
Owz	Parasites

Ox	Chordata
Oy	Hemichordata
Oz	Protochordata
P	Vertebrata
PA	Cyclostomata
PB	Ostracodermi
PC	Pisces <i>Ichthyology</i>
PCA	Elasmobranchii
PCP	Dipnoi
PD	Teleostomi
PE	Amphibia
PF	Reptilia <i>Herpetology</i>
PG	Aves <i>Ornithology</i>
PH	Mammalia
PHA	Prototheria
PHY	Eutheria
PI	Marsupialia
PIN	Edodientia
PJ	Edentata
PK	Ungulata
PL	Sirenia
PM	Cete (Cetacea)
PN	Ferae (Carnivora)
PO	Creodonta
PP	Glires (Rodentia)
PQ	Tillodontia
PR	Insectivora
PS	Chiroptera
PT	Primates
Pu	Economic zoology

This classification has been carried out to families and sub-families only in the Chordata, and even there not in the class Pisces. To have done the same for the Invertebrates would not only have enormously enlarged the classification, but, in the present state of knowledge, would, in many classes, have been confusing and unsatisfactory. Class-marks for the families among the invertebrates can be added by the librarian when necessary by following the plan adopted in the vertebrates.

Italicized scientific names indicate either obsolete terms or modern terms not formally adopted for this classification.

## OG Descriptive zoology

OGA Geographical zoology (Geographical distribution)

### SPECIAL FAUNA

OGAA	Terrestrial
OGAB	Alpine
OGAC	Cave (Including subterranean waters) <i>See also</i> OEBB
OGAD	Island
OGAE	Aquatic
OGAF	Planktonic. Plankton <i>See also</i> OEBP, OGDA
OGAG	Marine
OGAH	Littoral
OGAI	Nektonic Pelagic
OGAJ	Benthonic, Abyssal Bathybial <i>See also</i> OEBB
OGAK	Fluviatile and Lacustrine
OGAL	Laeustrine
OGAM	Crenic (Springs. Wells. Sinks)
OGAN	Aerial

### Faunal areas. Zoogeographical regions *See* OGA

The chief subdivisions (Palaearctic, Nearctic, etc.) have been arranged according to Sclater's classification. Any other system, however, can be used by adapting to it the sub-divisional class-marks.

OGAP	Palaearctic
OGAPA	European
OGAPE	Eremean
OGAPI	Chinese

OGAQ	Nearctic
OGAQ <sub>A</sub>	Canadian
OGAQ <sub>E</sub>	Western
OGAQ <sub>I</sub>	Eastern
OGAR	Palæotropical (Indo-African)
OGAS	Ethiopian (African)
OGAS <sub>A</sub>	Saharan
OGAS <sub>E</sub>	Malagasy
OGAS <sub>I</sub>	West African
OGAS <sub>O</sub>	Cape
OGASL	"Lemuria"
OGAT	Oriental (Indian)
OGAT <sub>A</sub>	Indian
OGAT <sub>E</sub>	Burmo-Chinese
OGAT <sub>I</sub>	Malayan
OGATO	Celebesian May be put in OGAU if preferred
OGAU	Austro-Malayan
OGAV	Australasian
OGAV <sub>A</sub>	Austral (Australian)
OGAV <sub>E</sub>	Papuan
OGAV <sub>I</sub>	Maorian (Novozelanian)
OGAV <sub>O</sub>	Polynesian
OGAVU	Hawaiian
OGAW	Neotropical
OGAW <sub>A</sub>	Antillean
OGAW <sub>E</sub>	Central American
OGAW <sub>I</sub>	Guiano-Brazilian
OGAWO	Patagonian

### Zones

OGAX	Holoarctic. Circumpolar
OGAY	Arctogea
OGAZ	Notogea

### Geographical distribution by groups

Includes not only the distribution of phyla and classes, such as Molluscs, Cheloniens, etc., but, with the addition of the country number, comprises the special faunas of particular countries, as Insects of New York, Fishes of India, etc.; reserving for Local faunas (OGV) the general works on the faunal representatives of any given country.

OGB

## Invertebrata

Subdivide this, and OGC, as in Descriptive Zoology, adding the characteristic letter or letters of the group and, when limited to particular countries, the country number, as: OGBU: Distribution of Insects, OGBU851, Insects of New York; OGCN, Distribution of Mammals, OGCN811, Mammals of Massachusetts.

OGC

## Vertebrata

OOGC	Fishes
OOGC	Amphibians
OOGC	Reptiles
OOGC	Birds
OOGC	Mammals
OOGC	Monkeys <i>See also OGASZ</i>

OGD

## Local faunas by countries

With local list

OGDA

## Planktonic faunas

With local list

OGDZ

## Zoological itineraries (Zoological expeditions and travels)

With local list

OGE

## Invertebrata

OGF

### Protozoa

OGG

#### Sarcodina (Gymnomyxa)

OGH

#### Mycetozoa (Myxomycetes, Myxogastres)

OGR

Acrasidae

OGR

Flagellidae

OGR

Myxomycetes

OGL

#### Foraminifera (Reticularia, Testacea)

OgJ

### Rhizopoda

OgA

Lobosa

OgB

Filosa

OGK

### Heliozoa

OgK

Astroheliozoa

OgK

Chlamydophora

OgK

Chilarothoraea

OgK

Desmothoraea

OGL	Radiolaria
OGLB	Spumellaria (Peripylaea)
OGLE	Acantharia (Actipylaea)
OGLN	Nassellaria (Monopylaea)
OGLP	Phaeodaria (Cannopylaea)
OGM	Proteomyxa
OGMA	Myxoidea
OGMC	Catallacta
OGN	Sporozoa
OGO	Telosporidia
OGOA	Gregarinida
OGOC	Schizogregariniae
OGOE	Eugregariniae
OGOI	Coccidiiae
OGOM	Haemosporidia
OGON	Haemosporea
OGOQ	Acystosporea
OGP	Nesosporidia
OGPA	Myxosporidia
OGPE	Actinomyxidiaceae
OGPI	Sarcosporidia
OGQ	Sporozoa incertae sedis
OGQA	Haplosporidia
OGQE	Serosporidia
OGQI	Exosporidia
OGQZ	Sporozoan hosts (arranged by classes)
OGR	Mastigophora
OGS	Flagellata (Eukaryotica)
OGSA	Pantostomata
OGSE	Protomastigaceae
OGSH	Chrysomonadaceae
OGSK	Cryptomonadaceae
OGSN	Volvocina
OGSR	Chloromonadaceae
OGSU	Euglenaceae
OGT	Silicoflagellata
OGU	Dinoflagellata
OGUA	Adinida
OGUD	Dinifera
OGUP	Polydiniumida

OGV	Cystoflagellata (Rynchoflagellata)
OGW	Infusoria (Ciliophora)
OGX	Ciliata
OGXA	Holotrichia
OGXC	Gymnostomata
OGXF	Hymenostomata
OGXH	Heterotrichia
OGXK	Polytrichia
OGXO	Oligotrichia
OGXP	Hypotrichia
OGXR	Peritrichia
OGY	Acinetaria (Suctoria. Tentaculifera)
OGZ	Metazoa
OH	Porifera (Parazoa) <i>Sponges</i>
OHc	Calcarea (Calcispongiae)
OHd	Homocoela
OHe	Heterocoela
OHG	Myxospongiae
OHh	Hexactinellida (Hyalospongiae)
OHt	Amphidiscophora
OHl	Hexasterophora
OHo	Octactinellida
OHp	Heteractinellida
OHr	Demospongiae
Ohs	Tetraxonida (Tetractinellida)
OHsc	Choristida
OHsl	Lithistida
OHu	Monaxonida
OHua	Italieondrina
OHue	Spintharophora (Hadromerina)
OHw	Ceratosa
OHwd	Dictyoceratina
OHwn	Dendroceratina
OHx	Porifera incertae sedis
OHy	<i>Enterozoa</i>
OHz	<i>Radiata</i>

OI	Coelenterata ( <i>Coelentera, Enterocoela</i> )
OIA	Hydrozoa (Hydromedusae. Hydroida)
OIB	Eleutheroblastea (Hydridae)
OIC	Milleporina (Hydrocorallina)
OID	Gymnoblastea (Anthomedusae)
OIDH	<i>Hydroid</i>
OIDM	<i>Medusoid</i>
OIE	Calyptoblastea (Leptomedusae)
OIEH	<i>Hydroid</i>
OIEM	<i>Medusoid</i>
OIF	Graptolithoidea
OIG	Stylasterina (Hydrocorallina in p't)
OIH	Trachomedusae
OII	Narcomedusae
OIJ	Siphonophora
OIJC	Calyceophorae
OIJH	Physophorae
OIJY	Hydrozoa incertae sedis
OIJZ	<i>Acalephae</i>
OIK	Scyphozoa (Scyphomedusae) <i>Jelly-Fish</i>
OIL	Cubomedusae
OIM	Stauromedusae
OIN	Coronata (Peromedusae in p't)
OIO	Discophora
OIOA	Semaeostomata
OIEO	Rhizostomata
OIP	Anthozoa (Actinzoa) <i>Corals</i>
OIQ	Alcyonaria
OIQA	Proboalcyonacea
OIQC	Synalcyonacea
OIQD	Stolonifera
OIQG	Coenothecalia
OIQI	Alcyonacea

OIQK	Gorgonacea
OIQL	Pseudaxonia
OIQN	Axifera
OIQP	Pennatulacea (Stelechotokea)
OIQB	Pennatulae
OIQS	Spicatae
OIQT	Verticilladæ
OIQV	Renilleæ
OIQY	Veretilleæ
OIR	Zoantharia
OIRA	Edwardsiidea (Incl. Protactiniae)
OIRC	Actiniaria
OIRM	Madreporaria
OIRP	Zoanthidea
OIRT	Antipathidea (Antipatharia)
OIRW	Cerianthidea
OIS	Ctenophora
OIT	Tentaculata
OIU	Cydippidea
OIV	Lobata
OIW	Cestoidea
OIX	Platyctenea
OIY	Nuda
OIYB	Beroidea
OIZ	<i>Coelomata (Coelomocoela)</i>
OJ	Echinodermata
OJA	Eleutherzoa
OJC	Asteroidea. <i>Starfishes</i>
OJCA	Spinulosa
OJCE	Velata
OJCT	Paxillosa
OJCO	Valvata
OJCU	Forcipulata
OJD	Ophiuroidea. <i>Brittle stars</i>
OJDA	Lysophiuræ
OJDE	Streptophiuræ
OJDI	Zygohipiuræ
OJDO	Cladophiuræ

OJB	Echinoidea. <i>Sea urchins</i>
OJF	Endocyclica
OJG	Clypeastroidea
OJGA	Protoclypeastroidea
OJGE	Euclypeastroidea
OJH	Spatangoidea
	If Bather's classification of the Echinidea is used the marks will be: OJF Regularia endobranchiata; OJG Regularia ectobranchiata; OJH Irregularia
OJK	Holothuroidea. <i>Sea cucumbers</i>
OJKA	Aspidochirota
OJKE	Elasipoda
OJKH	Pelagothuriida
OJKL	Dendrochirota
OJKM	Molpadiida
OJKS	Synaptida
OJL	Pelmatozoa
OJM	Crinoidea <i>Sea lilies</i>
OJQ	Inadunata
OJR	Articulata
OJS	Camerata
OJT	Edrioasteroidea (Thecoidea)
OJU	Carpoidea
OJV	Cystoidea
OJW	Blastoidea
	<i>Articulata</i> See OR
	<i>Annulosa</i> See ON
OJZ	Vermes
	This term, which represents a heterogeneous assemblage of worm-like creatures, is now rarely used—the members of the group having been distributed among the Platyhelminia, Nemathelmia, Trochelmia, and Annelida. The entry, however, must be included in the classification in order to accommodate the former publications under this grouping. The same remark applies to the Cuvierian Radiata, Articulata and Annulosa, as well as to the earlier constituted Molluscoidea.
OK	Platyhelminia (Platyhelmintha)
OKA	Turbellaria (Planaria)
OKB	Rhabdocoelida
OKBA	Rhabdocoela

OKBE	Alloioocoela
OKBI	Acoela
OKC	Triclada (Tricladida. Dendrocoela)
OKD	Polyclada (Polycladida. Cryptocoela)
OKE	Tenuocephaloidea
OKED	Dactylifera
OKF	Trematoda
OKG	Heterocotylea (Pectobothrii. Polysotomea. Monogenea)
OKH	Aspidocotylea (Aspidobothrii)
OKI	Malacocotylea (Malacobothrii. Distomea. Digenea)
OKJ	Cestoidea (Cestoda)
OKK	Cestoidea monozoa
OKKA	Amphilinacea
OKKG	Gyrocoptylaera
OKKL	Caryophyllacea
OKL	Cestoidea merozoa
OKLD	Dibothridiata
OKLF	Pseudophyllidea
OKLH	Tetrabothridiata
OKLI	Tetraphyllidea
OKLJ	Diphyllidea
OKLP	Tetrahyncha
OKLT	Tetracotylea
OKM	Rhombozoa
OKMD	Dicyemida
OKMH	Heterocyemida
OKO	Orthonectida
OKR	<i>Rhynchocoela</i>
OKS	Nemertea (Nemertini)
OKSA	Dimyaria
OKSB	Protonemertini Palaeonemertea in p't
OKSH	Mesonemertini Palaeonemertea in p't
OKSM	Metanemertini (Hoplonephrea)
OKST	Trimyaria
OKSU	Heteronemertini Schizopemertea

OKT	Nemathelmia (Nemathelminthes)
OKU	Nematoidea (Nematoda) <i>Thread-worms</i>
OKW	Nematomorpha
OKY	Acanthocephala
OL	Trochelmia (Trochelminthes)
OLA	Rotifera (Rotatoria)
OLB	Flosculariaceae
OLC	Melicertaceae
OLD	Bdelloida
OLE	Asplanchnaceae
OLF	Ploima
OLG	Illoricata
OLH	Loricata
OLJ	Scirtopoda
OLK	Seisonaceae
OLO	Gastrotricha
OLP	Euichthydina
OLQ	Apodina
OLT	Kinorhyncha (Echinoderidae)
OM	Mollusca
OMA	Amphineura (Isopleura. Placophora)
OMB	Polyplacophora
OMC	Aplacophora (Solenogastres)
OMD	Neomenioidea
OME	Chaetodermoidea
OMG	Gasteropoda (Gastropoda)
OMH	Streptoneura (Prosobranchiata)
OMI	Scutibranchia (Aspidobranchiata. Diotocardia)
OMID	Docoglossa
OMIR	Rhipidoglossa
OMJ	Pectinibranchia (Ctenobranchia. Monotocardia)

OMJB	Ptenoglossa
OMJC	Taenioglossa
OMJD	Platypoda
OMJE	Heteropoda
OMJG	Gymnoglossa
OMJQ	<i>Stenoglossa</i>
OMJR	Rachiglossa
OMJT	Toxoglossa
OMK	Euthyneura
OML	Opisthobranchia
OMM	Tectibranchia
OMMN	Nudibranchia
OMMR	<i>Ascoglossa</i>
OMN	Pteropoda
OMNG	Gymnosomata
OMNT	Thecosomata
OMO	Pulmonata
OMOB	Basominatophora
OMOS	Stylophorophora
OMP	Scaphopoda (Solenoconcha)
OMQ	Pelecypoda (Lamellibranchiata. Acephala)
OMQP	Protobranchia
OMR	Filibranchia
OMRA	Anomiacea
OMRC	Arcacea
OMRM	Mytilacea
OMS	Pseudodolaniellibranchia
OMT	Eulamellibranchia
OMTA	Submytilacea
OMTC	Tellinacea
OMTG	Veneracea
OMTK	Cardiacea
OMTM	Myacea
OMTP	Pholadacea
OMTR	Anatinacea

OMTS	Septibranchia
OMU	Cephalopoda
OMV	Tetrabranchia
OMVN	Nautiloidea (Tentaculifera)
OMW	Ammonoidea
OMX	Dibranchia (Acetabulifera)
OMY	Decapoda
OMYE	Oigopsida
OMYM	Myopsida
OMZ	Octopoda
ON	Annelida (Annelata. Annulosa).
ONA	Chaetopoda
ONB	Oligochaeta
ONC	Naidomorpha (Microdrili)
OND	Lumbricomorpha (Megadrili)
ONF	Polychæta
ONG	Phanerocephala
ONH	Nereidiformia
ONI	Spioniformia
ONJ	Capitelliformia
ONK	Scoleciformia
ONL	Terebelliformia
ONM	Cryptocephala
ONN	Sabelliformia
ONO	Hermelliformia
ONQ	Haplodrili (Archiannelida)
ONR	Myzostomida
ONS	Hirudinea (Discophora)
ONT	Rhynchobdellae
ONU	Gnathobdellae
ONV	Echiuroidea (Gephyrea in part)

ONW	Gephyrea
ONX	Sipunculoidea
ONY	Priapuloidea
ONZ	Epithetosomatoidea
Oo	<i>Molluscoidea</i>
OP	Polyzoa (Bryozoa)
OPA	Entoprocta
OPB	Ectoprocta
OPG	Gymnolaemata
OPH	Cyclostomata
OPK	Trepostomata
OPM	Cheilostomata
OPN	Ctenostomata
OPP	Phylactolaemata
	Phoronidea <i>See</i> OYA
OQ	Brachiopoda
OQA	Ecardines (Inarticulata. Tretenterata)
OQE	Atremata
OQN	Nectremata
OQP	Testicardines (Articulata. Clistenterata)
OQQ	Protremata
OQR	Telotremata
OQT	Chaetognatha
OR	Arthropoda (Articulata, <i>Cuv.</i> Tracheata ex. Crustacea)
ORA	Hyparthropoda [ <i>Hypothetical group</i> ]
ORB	Protarthropoda
ORC	Onychophora (Protracheata)
ORE	Euarthropoda
ORF	Myriapoda
ORG	Protosyngnatha
	Chilopoda (Syngnatha) <i>See</i> OTY
ORH	Archipolypoda

ORI	Chilognatha (Diplopoda)
ORJ	Schizotarsia
ORK	Sympyla
ORL	Pauropoda
ORN	Arachnida
ORO	Trilobitae
ORT	Pantopoda
ORU	Nymphonomorpha
ORV	Ascorhynchomorpha
ORW	Pycnogonomorpha
Os	Euarachnida <i>Spiders, Scorpions, etc.</i>
OSA	Delobranchia (Hydropneustea)
OSB	Xyphosura (Poecilopoda)
OSD	Gigantostacea (Palaeocarida)
OSDA	Pterygotomorpha
OSDE	Eurypteromorpha
OSE	Embolobranchia (Aeropneustea)
OSF	Scorpionidea
OSFA	Apoxyypoda
OSFD	Dionychopoda
OSH	Pedipalpi (Thelyphonidae)
OSHA	Uropygi
OSHE	Amblypygi
OSK	Araneida (Araneae)
OSKM	Mesothelae
OSKE	Opisthothelae
OSL	Palpigradi (Microthelyphonida)
OSN	Solpugida (Solifugae, Myctophorae)
OSP	Pseudoscorpiones (Chelonethi)
OSPA	Panctenodactyli
OSPH	Hemictenodactyli
OSQ	Podogona (Meridogastra)
OSR	Opiliones (Phalangidea)
OSRL	Laniatores
OSRP	Palpatores
OSRS	Anepignathi
OSt	Rhynchostomi (Acarida. Acarina)
OSTC	Cryptostigmata
OSTM	Metastigmata
OSTP	Prostigmata
OSTQ	Astigmata
OSTR	Vermiformia
OSTT	Tetrapoda

Osu	Arctisca (Tardigrada, Macrobolida, Colpoda)
Osw	Pentastomoidea (Pentastomida, Linguatulina)
OT	Crustacea ( <i>Branchiata</i> )
OTA	Malacostraca
OTB	Thoracostraca
OTC	Cumacea
OTD	Stomatopoda
OTE	Schizopoda
OTF	Decapoda <i>Shrimps, Lobsters and Crabs</i>
OTFB	Brachyura
OTFM	Maerura
OTG	Arthrostraca
OTH	Amphipoda
OTI	Isopoda
OTJ	Leptostraca
OTK	Entomostraca
OTL	Phyllopoda
OTM	Cladocera
OTS	Branchiopoda (Euphyllopoda)
OTO	Ostracoda
OTP	Copepoda
OTQ	Branchiura
OTR	Eneopepoda
OTS	Cirripedia (Thyrostraca)
OTT	Theracaea
OTU	Aseothoracaea
OTV	Abdominalia
OTW	Apoda
OTX	Rhynchocephala
OTY	Chilopoda (Sygnathida)
Ou	Hexapoda (Insecta— <i>apud auct. recen.</i> ) Entomology
OUA	Ametabola (Aptera, Apterygota)
OUB	Collembola
OUC	Thysanura
OUD	Mallophaga
OUE	Anophura (Pediculina, Parasitica)
OUF	Asaphiptera (Siphonaptera, Suctoria)
OUH	Hemimetabola (Exopterygota)
OUT	Orthoptera
OUC	Cursoria
OUCG	Gressoria
OUIS	Saltatoria

OUM	Amphibiotica
OUMA-	Plecoptera (Perlidae)
OUME	Odonata
OPME	Ephemeridae (Agnathi)
OUP	) Pseudoneuroptera ( <i>Corrodentia</i> )
OUPE	Embiidae
OUPM	Termitidae ( <i>Isoptera</i> )
OUPP	Psocidae
OUR	Thysanoptera (Physopoda)
OUS	Hemiptera (Rhynchota)
OUSH	Heteroptera
OUSM	Nomoptera
	Parasitica <i>See OUE</i>
OUT	Metabola (Holometabola. Endopterygota)
OUW	Neuroptera
OUWA	Planipennia
OUWM	Mecoptera (Mecoptera. Panorpatae)
OUWT	Trichoptera
Ov	Lepidoptera
OVA	Rhopalocera (Macrolepidoptera) <i>Butterflies</i>
OVB	Heterocera (Microlepidoptera) <i>Moths</i>
OUh	Coleoptera
OVK	Lamellicornia
OVL	Adephaga (Caraboidea)
OVM	Polymorpha (incl. Clavicornia, Sericicornia)
OVP	Heteromera
OVQ	Phytophaga
OVR	Rhynchophora
OVS	Strepsiptera
OVT	Diptera
OVu	Orthorrhapha
Ovv	Cyclorrhapha
Ovw	Pupipara

Ow	Hymenoptera
OwA	Sessiliventres (Phytophaga, Securifera)
OwD	Petiolata (Petioliventres, Apocrita)
OwG	Parasitica (Terebrantia)
OwJ	Tubulifera
OwL	Aculeata <i>Bees, Wasps and Ants</i>
OwN	Anthophila (Apidae) <i>Bees</i>
OwP	Diptera <i>Wasps</i>
OwR	Fossores
OwT	Heterogyna (Formicidae) <i>Ants</i>
Owx	Economic entomology  If preferred, books may be put under Economic Zoology (Pt. I)
Owz	Parasites, General works; If not put in Oej: Particular parasites are referred to the classes to which they belong <i>See Oej-Oejz, Oue, Owg</i>
Ox	Chordata
Oy	Hemichordata (Adelochorda)
Oya	Vermiformia (Phoronidea)
Oyc	Pterobranchia (Cephalodiscidae, Rhabdopleuridae)
Oye	Enteropneusta
Oyg	Glandicpitidae
Oyh	Harrimaniidae
Oyp	Ptyhoderidae
Oz	Protochordata
Oza	Urochorda (Tunicata)
Ozc	Copelatae
Ozd	Larvacea (Larvalia)
Ozda	Appendiculariidae
Ozdk	Kovalevskijidae

OZE	Acopa
OZF	Ascidacea
OZG	Monascidiæ (Simplices)
OZGA	Aseididae
OZGB	Asciidiinae
OZGC	Corellinae
OZGH	Hypobrythiinae
OZIT	Clavellinidae
OZI	Cynthiae
OZIB	Bolteniinae
OZIC	Cynthiae
OZIS	Styelinae
OZK	Molgulidae
OZM	Synascidiæ (Compositæ)
OZMB	Botrylloidae
OZMC	Coelocormidae
OZMD	Didemnidae
OZMG	Diplosomatidae
OZMI	Distomatidae
OZMP	Polyclinidae
OZMR	Polystyelidae
OZN	Luciæ (Salpiformes)
OZNP	Pyrosomatidae
OZP	Thaliacea
OZQ	Cyclomyaria
OZQP	Doliolidae
OZR	Desmomyaria (Hemimyaria)
OZRO	Octaedremidae
OZRS	Salpidae
OZT	Cephalochordata (Acrania. Leptocardii)
OZU	Amphioxi (Cirrhostomes)
OZV	Branchiostomidae
P	Vertebrata (Craniata)
PA	Cyclostomata (Marsipobranchii)
PAA	Hypotreta (Myxioides)
PAH	Heptatremidae
PAM	Myxinidae
PAO	Hyperoartia (Petromyzontes)
PAP	Petromyzontidae

PAR	Cycliae
PAS	Palaeospondylidae
PB	Ostracodermi (Ostracophori)
PBA	Heterostraci
PBC	Coelolepidae
PBD	Drepanaspidae
PBG	Psammosteidae
PBK	Pteraspidae
PBO	Osteostraci (Asridocephali)
PBP	Ateleaspidae
PBQ	Cephalaspidae
PBR	Euphaneropidae
PBS	Tremataspidae
PBT	Antiarchi
PBU	Asterolepidae
PBV	Ceraspidae
PBX	Anaspida
PBY	Birkenniidae
PC	Pisces <i>Fishes. Ichthyology</i>
PCA	Elasmobranchii (Plagiostomi. Chondropterygii)
PCB	Plagiostoma
PCC	Pleuropterygii (Cladoselache)
PCD	Xenacanthini (Teethyotomi)
PCE	Aeanthodei (Aeanthodini)
PEC	Selachii
PGG	Protoselachii
PGH	Euselachii
PEK	Raiae (Batoidei) <i>Rays. Skates</i>
PCL	Holocephali
PCO	Ichthyodorulites Fossil remains (fin spines) of extinct Elasmobranchs not sufficiently complete for classification. Arrange alphabetically by "generic" name

P <sub>CP</sub>	Dipnoi ( <i>Dipneusti</i> )
P <sub>CQ</sub>	Ctenodipterini
P <sub>CS</sub>	Sirenoidei
P <sub>CT</sub>	Arthrodira
P <sub>CU</sub>	Temnothoraci
P <sub>CW</sub>	Astrothoraci
P <sub>D</sub>	Teleostomi <i>Ganoids and Bony fishes</i>
P <sub>DA</sub>	Crossopterygia
P <sub>DAB</sub>	Haplistia
P <sub>DAE</sub>	Rhipidistia ( <i>Cyclodipterini</i> )
P <sub>DAI</sub>	Actinistia
P <sub>DAL</sub>	Cladistia
P <sub>DB</sub>	Actinopterygia <i>Ganoids</i>
P <sub>DBC</sub>	Chondrostei
P <sub>DBP</sub>	Protospondyli (Holosteii in p't)
P <sub>DBU</sub>	Aethespondyli (Holosteii in p't)
P <sub>DC</sub>	Teleostei <i>Bony fishes</i>
P <sub>DCZ</sub>	Ostariophysi
P <sub>DD</sub>	Nematognathi
P <sub>DE</sub>	Plectospondyli
P <sub>DEE</sub>	Eventognathi
P <sub>DEH</sub>	Heterognathi
P <sub>DEN</sub>	Gymnonoti
P <sub>DF</sub>	Seyphophori
P <sub>DG</sub>	Symbranchia
P <sub>DH</sub>	Carenchelyi
P <sub>DT</sub>	Apodes
P <sub>DJ</sub>	Lyomeri
P <sub>DK</sub>	Isospondyli
P <sub>DL</sub>	Iniomii
P <sub>DM</sub>	Heteromii
P <sub>DMZ</sub>	Lyopomii
P <sub>DN</sub>	Xenomii
P <sub>DO</sub>	Haplomii
P <sub>DP</sub>	Synentognathi
P <sub>DQ</sub>	Solenichthys
P <sub>DR</sub>	Thoracosteii (Catostomi in p't)
P <sub>DRH</sub>	Hemibranchii
P <sub>DRL</sub>	Lophobranchii
P <sub>DS</sub>	Hypostomides
P <sub>DT</sub>	Percesocea
P <sub>DV</sub>	Anacanthini

PDV	Acanthoptenygii
PDVA	Beryeoidea
PDVC	Percoidae
PDVE	<i>Squamipinnes</i>
PDVF	Chaetodontoidea (incl. Teuthidoidea)
PDVH	Holeonoti
PDVJ	Chromides
PDVL	Labroidea (Pharyngognathi in p't)
PDVN	Scombroidea
PDVP	Zoidea (incl. Heterosomata and Zeorhombi)
PDVS	Kurtiformes
PDVT	Gobioidea
PDVU	Discocephali
PDVX	<i>Cataphracti</i>
PDW	Seleroparei (Loricata and Craniomi)
PDWC	Jugulares
PDWD	Trachinoidea
PDWF	Xenopterygii
PDWH	Blennoidea
PDWJ	Haplodoci
PDWM	Ophidiondea
PDWN	Taeniosomi
PDWO	Opisthomni
PDWR	Pediculati
PDWR	Pleotognathi
PDWS	Selerodermi (incl. Ostracodermi)
PDWU	Gymnodontes
PDWZ	Otoliths Fossil ear-bones. Arrange alphabetically without subdivision
PDX	Ocean ichthyology (General works) <i>Or in</i> Pc
PDY	Deep-sea fishes
PE	Amphibia
PEA	<i>Phractamphibia</i>
PEB	Stegocephalia (Labyrinthodontia)
PEC	Apoecospondyli (Temnospondyli. Stereo-spondyli)
PED	<i>Rachitomi. Embolomeri</i>
PEDA	Anthracosauridae
PEDAR	Archegosauridae (Trimerorhachidae)
PEDC	Cricotidae
PEDD	Dendrerpetontidae (Baphetidae)
PEDE	Eryopidae
PEDL	Labyrinthodontidae

PEDM	Mastodontosauridae
PEDN	Nyraeniidae
PEDS	Sauroleuridae (Colosteidae)
PERH	<b>Microsauria (Lepospondyli. Aistopoda)</b>
PERHD	Diplocaulidae
PERHO	Dolichosomatidae
PERHI	Hylonomidae
PERHL	Limnerpetontidae
PERHM	Molgophidae (Phlegetontidae)
PERHP	Protritonidae (Branchiosauridae)
PERHT	Ptyoniidae (Urocordylidae)
PERT	Tuditanidae (Microbrachidae)
PERL	<i>Lissamphibia</i>
PERO	Ophiomorpha (Apoda. Gymnophiona)
PEROC	Caeciliidae
PERQ	<b>Urodela (Caudata)</b>
PERR	Perennibranchiata ( <i>Phanerobranchia</i> )
PERP	Proteidae
PERS	Sirenidae
PERS	<i>Deotremata (Cryptobranchia)</i>
PERSA	Amphiumidae
PERSC	Cryptobranchidae
PERSH	Hylaeobatrachidae
PET	<b>Salamandrina</b>
PETS	Salamandridae
PEU	<b>Anura (Ecaudata. Salicentia)</b>
PEV	Aglossa
PEVD	Dactylethridae (Xenopodidae)
PEVP	Pipidae
PEW	Phaneroglossa (Arcifera. Firmisternia)
PEWA	Asterophrydidae
PEWAM	Amphignathodontidae
PEWB	Bufonidae
PEWC	Ceratobatrachidae
PEWCO	Colostethidae
PEWCP	Cophylidae
PEWCY	Cystignathidae
PEWD	Dendrobatidae
PEWDE	Dendrophryniscidae
PEWDT	Discoglossidae
PEWDY	Dyscophidae

PEWE	Engystomatidae
PEWG	Genyophryidae
PEWH	Hemiphractidae
PEWHY	Hylidae
PEWP	Pelobatidae
PEWPE	Pelodytidae
PEWR	Ranidae
PEY	<i>Amphibia incertae sedis</i>
	Arrange alphabetically by generic name
PEZ	<i>Sauropsida (Reptilia and Aves)</i>
PF	Reptilia Reptiles Herpetology
PFA	Synapsida
PFAC	Cotylosauria (Pareiasauria)
PFACP	Pareiasauridae
PFACPA	Pariotichidae
PFAL	Chelydosauria
PFALD	Diadectidae
PFALO	Otocoelidae
PFB	Anomodontia (Theromorpha)
PFBA	Theriodontia
PFBE	Therocephalia
PFBEA	Aelurosauridae
PFBED	Deuterosauridae
PFBES	Scylacosauridae
PFBI	Cynodontia
PFBIC	Cynognathidae
PFBIG	Gomphognathidae
PFBIL	Lycosauridae
PFBO	Dieynodontia
PFBOC	<i>Cistecephalidae</i>
PFBOD	Dieynodontidae
PFBOE	Endothiodontidae
PFBOL	Lystrosauridae
PFC	Placodontia
PFCP	Placodontidae
PFD	Sauroptrygia
PFDA	Nothosauria
PF DAN	Nothosauridae
PFDP	Plesiosauria
PFDP E	Elasmosauridae
PFDP P	Plesiosauridae
PFDPPL	Pliosauridae

PFE	Testudinata (Chelonia)
PFEA	Athecea
PFEAD	Dermochelydidae (Sphargididae)
PFEC	Thecophora
PFEG	Pleurodira
PFEGC	Carettochelydidae
PFEGCH	Chelydidae
PFEGP	Pelomedusidae
PFEGPL	Pleurosternidae ( <i>Baenidae</i> )
PFEGPN	Plesiochelydidae
PFEGS	<i>Sternothaeridae</i>
PFEK	Cryptodira
PFEKA	Adocidae
PFEKAN	Anostiridae (Pseudolirionychidae)
PFEKC	Cheloniidae (Chelonidae)
PFEKCH	Chelydridae
PFEKCI	Cinosternidae
PFEKD	Dermatochelyidae
PFEKE	Emydidae
PFEKP	Platysternidae
PFEKPR	Protostegidae
PFEKT	Testudinidae (Chersidae)
PFEKTH	Thalassemydidae (Propleuridae)
PFEKTO	Toxochelyidae
PFET	Trionychia (Trionychoidea)
PFETP	Plastomenidae
PFETT	Trionychidae
FFF	Diapsida
PFG	Diaptosauria
PFGA	Proeolophonia
PFGD	Protorosauria
PFGDP	Palaeohatteriidae
PFGDPR	Protorosauridae
PFGH	Proganosauria (Mesosauria)
PFGHM	Mesosauridae
PFGN	Gnathodontia (Rhynchosauria)
PFGNR	Rhynchosauridae
PFGP	Pelyosauria
PFGPB	Bolosauridae
PFGPC	Clepsydropsidae (Edaphosauridae)
PFGQ	Choristodera (Simaedosauria)
PFGQC	Champsosauridae

PFGR	Rhynchocephalla (Sphenodontina)
PFGRA	Acrosauridae
PFGRP	Pleurosauridae
PFGRS	Sphenodontidae
PFH	Parasuchia (Thecodontia)
PFHA	Aetosauria (Pseudosuchia)
PFHAA	Aetosauroidae
PFHP	Phytosaura
PFHPP	Phytosauridae (Belodontidae)
PFI	Ichthyosauria (Ichthyopterygia)
PFIB	Baptanodontidae
PFIP	Proteosauridae
PFK	Crocodilia (Loricata, Cataphracta, Emydosauria)
PFL	Mesosuchia
PFLO	Goniopholidae
PFLT	Teleosauridae
PFM	Eusuchia
PFMA	Atoposauridae
PFMC	Crocodilidae
PFMG	Gavialidae
PFMM	Maerorhynchidae
PFN	Thalattosuchia
PFNM	Metriorhynchidae
PFO	Dinosauria
PFPO	Theropoda (incl. Megalosauria, Sympypoda, Saurischia, Gouipoda)
PFPA	Anchisauridae (Amphisauridae)
PFPC	Ceratosauridae
PFPCO	Coeluridae
PFPCP	Compsognathidae
PFPH	Hallucopodidae
PFPM	Megalosauridae (incl. Allosauridae, Labrosauridae)
PFPO	Ornithomimidae
PFPOZ	Zanclodontidae (Plateosauroidae)
PFQ	Opisthocephalia (Sauropoda, Cetiosaura)
PFQA	Atlantosauroidae (Camarasauridae)
PFQD	Diplodoeidae
PFQM	Morosauroidae (Cetiosauridae)
PFQT	Titanosauridae
PFR	Orthopoda (Predentata)
PFRA	Stegosauria (Stegosauroidea)
PFRAN	Nodosauridae
PFRAS	Scelidosauridae
PFRAST	Stegosauroidae

PFRE	Ceratopsia (Ceratopoidea)
PFRG	Ceratopsidae
PFRI	Iguanodontoidea (Ornithopoda)
PFRIC	Camptosauridae (Camptonotidae)
PFRH	Hypsilophodontidae
PFRIT	Iguanodontidae
PFRIM	Macelognathidae
PFRIN	Nanosauridae
PFRIT	Trachodontidae (Hadrosauridae)
PFS	Squamata (Lepidosauria. Plagiotremata)
PFT	Pythonomorpha (Mosasauria)
PFTD	Dolichosauri
PFTDD	Dolichosauridae
PFTDP	Plioplatycearpidae
PFTM	Mosasauri
PFTMM	Mosasauridae
PFTMN	Mosasaurinae
PFTMP	Platecarpinae
PFTMT	Tylosaurinae
PFU	Lacertilia
PFUA	Agamidae
PFUAM	Amphisbaenidae
PFUAN	Anelytropidae
PFUD	Dibamidae
PFUG	Geckonidae
PFUGE	Gerrhosauridae
PFUH	Helodermatidae
PFUI	Iguanidae
PFUL	Lacertidae
PFULA	Lanthanotidae
PFUP	Pygopodidae
PFUS	Seineidae
PFUT	Tejidae
PFUTR	Trogonophidae
PFUV	Uroplatidae
PFUV	Varanidae
PFUX	Xantusiidae
PFUXE	Xenosauridae
PFUXE	Zonuridae
PFV	Rhoptoglossa
PFVC	Chamaeleontidae

PFW	Ophidia (Serpentes) <i>Snakes</i>
PFWA	Acrochordidae
PFWAM	Amblycephalidae
PFWAT	Atraetaspidae
PFWB	Boidae
PFWC	Causidae
PFWCH	Charinidae
PFWCO	Colubridae
PFWCOA	Aglyphae
PVWCOC	Colubrinae
PFWCOD	Dasypeltinae (Rachiodontinae)
PFWCOO	Opisthoglyphae
PFWCOP	Dipsadomorphinae
PFWCOQ	Elachistodontinae
PFWCOR	Homalopsinae
PFWCOT	Proteroglyphae
PFWCOU	Elapinae
PFWCOV	Hydrophinae <i>Water-snakes</i>
PFWCR	Crotalidae <i>Rattlesnakes</i>
PFWD	Dendraspididae
PFWDR	Dryophidae
PFWG	Glauconidae
PFWI	Ilysiidae
PFWL	Lycodontidae
PFWP	Palaeophidae
PFWPV	Pythonidae
PFWT	Tortricidae
PFWTY	Typhlopidae
PFWU	Ungaliidae
PFWUR	Uropeltidae (Rhynophidae)
PFWV	Viperidae
PFWX	Xenopeltidae
PFX	Pterosauria (Ornithosauria)
PFXN	Nyctosauridae
PFXO	Ornithocephalidae (Pterodactylidae)
PFXOR	Ornithocheiridae
PFXP	Pteranodontidae (Ornithostomatidae)
PFY	<i>Reptilia incertae sedis</i> Arrange alphabetically by generic name
PFZ	<i>Sauricnites</i> (Fossil footprints of reptiles) Arrange alphabetically by name
PG	Aves <i>Birds. Ornithology</i>
PGA	Saururae (Archaeornithes Saurornithes)

PGB	<i>Ornithopappi</i>
PGBA	Archaeopterygidae
PGE	Eurhipidurae (Neornithes. Ornithurae)
PGF	<i>Dromaeognathi</i>
PGH	Ratitae
PGI	Rheiformes (Rheae)
PGIR	Rheidae
PGJ	Struthioniformes
PGJS	Struthionidae
PGK	Casuariiformes (Megistanes)
PGKC	Casuariidae
PGKD	Dromaeidae
PGKDR	Dromornithidae
PGL	Didornithiformes (Immanes)
PGLD	Dinornithidae
PGLP	Palapterygidae
PGM	Aepyornithiformes
PGMA	Aepyornithidae
PGN	Apterygiformes
PGNA	Apterygidae
PGO	Odontolcae (Odontornithes)
PGOE	Eualiornithidae
PGOH	Hesperornithidae
PGP	Euornithes
PGR	Carinatae
PGRA	Tinamiformes (Crypturi)
PGRAT	Tinamidae
PGRB	Galliformes
PGRC	Mesitae
PGROM	Mesitidae
PGRD	Galli
PGRDC	Cracidae
PGRDCE	Craecinae
PGRDCO	Oreophasinae
PGRDCP	Penelopinae
PGRDM	Megapodiidae
PGRDME	Meleagridae
PGRDP	Phasianidae
PGRDPN	Numidinae
PGRDPO	Odontophorinae
PGRDPP	Phasianinae
PGRDT	Tetraonidae

PORI	Hemipodii
PGRHPP	Pedionomidae
PGRHT	Turnicidae
PGRJ	Pterocliformes
PGRJF	Pteroclidae
PGRJG	Columbiformes
PGRJG	Caloenaidae
PGRJKO	Columbidae
PGRJEP	Columbinae
PGRJGQ	Peristerinae
PGRJGS	Sturnoemadinae
PGRJGZ	Zenaidinae
PGRJD	Dididae
PGRJD	Didunculidae
PGRJG	Gouridae
PGRJT	Treronidae
PGRK	Opisthoicomiformes
PGRKO	Opisthoicomidae
PGRU	Ralliformes
PGRUR	Rallidae
PGRURF	Fulicinae
PGRURG	Gallinulinae
PGRURR	Rallinae
PGRN	<i>Ceomorphae</i>
PGRQ	Podicipediformes
PGRP	Podicipedidae
PGRP	Colymbiformes
PGRPC	Colymbidae
PGRQ	Sphenisciformes
PGRQC	Cladornithidae
PGRQS	Spheniscidae (Aptenodytidae)
PGRH	<i>Tubinares</i>
PGRS	Procellariiformes
PGRSO	Oceanitidae
PGRSP	Procellariidae
PGRSPD	Diomedinae
PGRSPP	Pelecanoidinae
PGRSPQ	Procellariinae
PGRT	Aleiformes
PGRTA	Alcidae
PGRTH	Fratinatordiae
PGRV	Lariformes
PGRVL	Laridae
PGRVLA	Larinae
PGRVLR	Rhynelopinae
PGRVLS	Stereorariinae
PGRVLT	Sterninae

PGRW	Charadriiformes
PGRWA	Aphrizidae
PGRWC	Charadriidae
PGRWCC	Charadriinae
PGRWCD	Scolopacinae
PGRWCF	Tringinae
PGRWCH	Chionididae
PGRWG	Glareolidae
PGRWGD	Dromadinae
PGRWGG	Glareolinae
PGRWH	Hæmatopodidae
PGRWJ	Jacanidae (Parridae)
PGRWO	Oedienemidae
PGRWP	Phalaropidae
PGRWR	Recurvirostridae
PGRWT	Thinocorythidae
PGRX	Gruiformes
PGRXA	Aramidae
PGRXC	Cariamidae
PGRXE	Eurypygidae
PGRXG	Gruidae
PGRXH	Heliorhithidae
PGRXO	Otididae
PGRXP	Psophiidae
PGRXR	Rhinocerotidae
PGRY	Stereornithes
PGRYP	Phororachidae
Pgs	<i>Ciconiformes</i>
PgsA	<i>Herodii. Pelargomorphae</i>
PgsB	Ardeiformes
PgsBA	Ardeidae
PgsBB	Balaenicipitidae
PgsBC	Ciconiidae
PgsBI	Ibididae
PgsBJ	Ibidinae
PgsBK	Plataleinae
PgsBS	Scopidae
PgsC	<i>Chaenomorphae</i>
PgsD	Phoenicopteriformes
PgsDP	Palaeolodidae
PgsDPH	Phoenicopteridae
PgsE	Anseriformes
PgsF	Anhimoidea (Palamedeidae)
PgsFA	Anhimidae
PgsG	Anatoidea (Anseres)
PsgGA	Anatidae
PsgGAA	Anatinæ
PsgGAB	Anseranatinæ

PGSGAC	Anserinae
PGSGAD	Cereopsinae
PGSGAE	Chenonettinae
PGSGAF	Cygninae
PGSGAG	Erismaturinae
PGSGAI	Fuligulinae
PGSGAM	Merganettinae
PGSGAN	Merginae
PGSGAP	Plectropterinae
PGSGC	Cnemiornithidae
PGSH	Gastornithiformes
PGSHG	Gastornithidae
PGSI	Ichthyornithiformes (Odontotormae, Odontormae, Pteropappi)
PGSIA	Apatornithidae
PGSII	Ichthyornithidae
PGSJ	<i>Steganopodes</i>
PGSL	Pelecaniformes
PGSLA	Anhingidae (Plotidae)
PGSLF	Fregatidae (Tachypetidae)
PGSLP	Pelagornithidae
PGSLPE	Pelecanidae
PGSLPH	Phaethontidae
PGSLPI	Phalaerocoracidae
PGSLS	Sulidae
PGSN	<i>Raptiores, Falconiformes</i>
PGSP	Cathartidiformes
PGSPC	Cathartidae (Sarcorhamphidae)
PGSR	Accipitriformes
PGSRF	Falconidae
PGSRFA	Accipitrinae
PGSRFB	Buteoninae
PGSRFC	Circinae
PGSRFF	Falconinae
PGSRFG	Gypaetinae
PGSRFM	Milvinae
PGSRFP	Polyborinae
PGSRG	Gypogeronidae (Serpentariidae)
PGSRP	Pandionidae
PGSS	Strigiformes
PGSSA	Alucoinae
PGSSS	Strigidae
PGSST	Buboninae
PGSSV	Striginae
PGST	Psittaciformes
PGSTP	Pionidae

P <small>G</small> S <small>T</small> PS	Psittacidae
P <small>G</small> S <small>T</small> PT	Cacatuinae (Plectolophinae)
P <small>G</small> S <small>T</small> PU	Conurinae
P <small>G</small> S <small>T</small> PV	Nasiterninae
P <small>G</small> S <small>T</small> PW	Palaeornithinae
P <small>G</small> S <small>T</small> PX	Platycercinae
P <small>G</small> S <small>T</small> PY	Psittacinae
P <small>G</small> S <small>T</small> S	Stringopidae
P <small>G</small> S <small>T</small> T	Trichoglossidae
P <small>G</small> S <small>T</small> TC	Cyclopsittacinae
P <small>G</small> S <small>T</small> TL	Loriinae
P <small>G</small> S <small>T</small> TN	Nestorinae
P <small>G</small> S <small>W</small>	<i>Picariae</i>
P <small>G</small> T	Coraciiformes
P <small>G</small> T <small>A</small>	Podargi
P <small>G</small> T <small>A</small> P	Podargidae
P <small>G</small> T <small>A</small> S	Steatornithidae
P <small>G</small> T <small>C</small>	Coraciace
P <small>G</small> T <small>CC</small>	Coraciidae
P <small>G</small> T <small>CC</small> C	Coraciinae
P <small>G</small> T <small>CC</small> L	Leptosomatinae
P <small>G</small> T <small>C</small> M	Momotidae
P <small>G</small> T <small>C</small> T	Todidae
P <small>G</small> T <small>E</small>	Halcyones
P <small>G</small> T <small>E</small> A	Alcedinidae
P <small>G</small> T <small>E</small> AL	Alcedininae
P <small>G</small> T <small>E</small> AH	Daceloninae (Halcyoninae)
P <small>G</small> T <small>G</small>	Bucerotes
P <small>G</small> T <small>GB</small>	Bucerotidae
P <small>G</small> T <small>H</small>	Upupae
P <small>G</small> T <small>H</small> I	Irrisoridae
P <small>G</small> T <small>H</small> U	Upupidae
P <small>G</small> T <small>I</small>	Meropes
P <small>G</small> T <small>IM</small>	Meropidae
P <small>G</small> T <small>J</small>	Caprimulg
P <small>G</small> T <small>J</small> C	Caprimulgidae
P <small>G</small> T <small>J</small> CC	Caprimulginae
P <small>G</small> T <small>J</small> CN	Nyctibiinae
P <small>G</small> T <small>K</small>	Cypseli
P <small>G</small> T <small>K</small> M	Macropterygidae (Dendrochelidontidae)
P <small>G</small> T <small>K</small> MI	Micropodidae (Cypselidae)
P <small>G</small> T <small>K</small> MJ	Chaeturinae
P <small>G</small> T <small>K</small> MK	Micropodinae (Cypselinae)
P <small>G</small> T <small>L</small>	Trochili
P <small>G</small> T <small>LT</small> T	Trochilidae
P <small>G</small> T <small>M</small>	Trogones
P <small>G</small> T <small>MT</small>	Trogonidae

PGTP	Coccyges
PGTQ	Cneuli
PGTQC	Colidae
PGTQCC	Cuculidae
PGTQCE	Centropodinae
PGTQCG	Crotophaginae
PGTQCI	Cuculinae
PGTQCL	Diplopterinae
PGTQCN	Neomorphinae (Saurotherinae)
PGTQCP	Phoenicophaeninae
PGTR	Musophagi
PGTRM	Musophagidae
PGTS	Scansores
PGTT	Indicatores
PGTTI	Indicatoridae
PGTU	Capitonidae
PGTUC	Capitonidae (Megalaemidae)
PGTUR	Rhamphastidae
PGTV	Piciformes
PGTVB	Bucconidae
PGTVG	Galbulidae
PGTVP	Picidae
PGTVPI	Iynginae
PGTVPP	Picinae
PGTVPQ	Picumninae
PGTX	Eurylaemiformes (Sub-clamatores)
PGTXE	Eurylaemidae
PGTY	Menuriformes (Snb-oscines)
POTYA	Atrichornithidae
PGTYM	Menuridae
PGU	Passeriformes (Insessores)
PGV	Clamatores (Mesomyodi)
PGVC	Conopophagidae
PGVCO	Cotingidae
PGVCOA	Attilinae
RGVCOC	Cotinginae
PGVCOG	Gymnoderinae
PGVCOL	Lipauginae
PGVCOR	Rupicolinae
PGVCOT	Tityriniae
PGVD	Dendrocolaptidae
PGVDD	Dendrocolaptinae
PGVDF	Furnariinae
PGVDS	Sclerurinae
PGVDSY	Synallaxinae
PGVF	Formicariidae
PGVFF	Formicariinae
PGVFG	Grallariinae
PGVFT	Thamnophilinae

PGVO	Oxyrhampidae
PGVP	Philepittidae
PVGPH	Phytotomidae
PGVPI	Pipridae
PGVPJ	Pittidae
PGVPT	Pteroptochidae
PGVT	Tyrannidae
PGVTE	Elaineinae
PGVTP	Platyrhynchinae
PGVTT	Taeniopterinae
PGVTY	Tyranninae
PGVX	Xenicidae
PGW	Ossines (Acromyodi)
PGWA	Alaudidae
PGWAM	Ampelidae
PGWAMA	Ampelinac
PGWAMP	Ptilogonatinæ (Ptilogonydinæ)
PGWAR	Artamidae
PGWC	Campephagidae
PGWCE	Certhiidae
PGWCEC	Certhiinae
PGWCET	Tichodrominae
PGWCH	Chamaeidae
PGWCI	Cinclidae
PGWCN	Coerebidae
PGWCO	Corvidæ
PGWCOC	Corvinae
PGWCOF	Fregilinae
PGWCOG	Garrulinae
PGWD	Dicaeidae
PGWDI	Dieruridae
PGWDR	Drepanididae
PGWE	Eulabetidae
PGWEU	Eurycerotidae
PGWF	Fringillidae
PGWFC	Coccothraustinae
PGWFE	Emberizinae
PGWFF	Fringillinae
PGWH	Henicuridae (Enicuridae)
PGWHI	Hirundinidae
PGWHY	Hyposittidae
PGWI	Icteridae
PGWIA	Agelaeinae
PGWIC	Cassicinae
PGWII	Icterinae
PGWIQ	Quiscalinae
PGWIS	Sturnellinae

PGWLA	Laniidae
PGWLAG	Gymnorhininae
PGWLAL	Laniinae
PGWLAM	Malaeonotinae
PGWLAP	Paehyephalinae
PGWLE	Leiotrichidae
PGWM	Meliphagidae
PGWME	Meliphaginae
PGWMF	Myzomelinae
PGWMI	Mlinidae
PGWMN	Mniotiltidae (Sylvicolidae)
PGWMO	Motacillidae
PGWMOA	Anthinae
PGWMOM	Motaeillinae
PGWMU	Muscicapidae
PGWN	Neetariniidae
PGWO	Oriolidae
PGWP	Pauuridae
PGWPA	Paradiseidae
PGWPB	Paridae
PGWPL	Ploceidae
PGWPLP	Ploceinae
PGWPLV	Viduinae
PGWPR	Prionopidae (Aerocharidae)
PGWPT	Ptilonorhynchidae
PGWPY	Pyenonotidae
PGWS	Sittidae
PGWST	Sturnidae
PGWSY	Sylviidae
PGWSYP	Polioptilinae
PGWSYR	Régulinae
PGWSYS	Sylviinae
PGWT	Tanagridae
PGWTI	Timeliidae (Timelidae)
PGWTR	Troglodytidae
PGWTU	Turdidae
PGWTUM	Myiadestinae
PGWTUT	Turdinae
PGWV	Vireonidae
PGWZ	Zosteropidae
PGX	Aves incertae sedis (arr. alphabetically by name of genera)
PGY	Ichnites (Ornithichnites) (arr. alphabetically by so-called "genera")
PGZ	Oology

# PH Mammalia

PHA	Prototheria
PHB	Protodonta
PHBD	Dromatheriidae
PHL	Allotheria (Multituberculata)
PHLB	Bolodontidae
PHLP	Plagiaulacidae (Neoplagiaulacidae, Polymastodontidae)
PHLPP	Polydolopidae
PHLPT	Tritylodontidae
PHT	Monotremata (Ornithodelphia)
PHTO	Ornithorhynchidae
PHTT	Tachyglossidae (Echidnidae)
PHY	Eutheria
PHZ	<i>Didelphia</i>
PI	Marsupialia
PIA	Diprotodontia
PIAA	Abderitidae
PIAD	Diprotodontidae (Nototheriidae)
PIAE	Epanorthidae
PIC	Macropodidae (Hypsiprymnodontidae)
PICH	Hypsiprymnodontinae
PICM	Macropodinae
PICR	Potoroinae
PIE	Phalangistidae (Phalangeridae, Thylacoleonidae)
PIEP	Phalangistinae
PIEPH	Phascolarctinae
PIET	Tarsipedinae
PIF	Phaseolomyidae
PIK	Polyprotodontia
PIKA	Amphitheriidae (Dryolestidae, Amblotheriidae)
PIKB	Borhyaenidae (Sparassodontidae)
PIKC	Cimolestidae
PIKD	Dasyuridae
PIKDI	Didelphyidae
PIKG	Garzonidae
PIKM	Microbiotheriidae
PIKN	Notoryctidae
PIKP	Pauromyidae
PIKPE	Peramelidae
PIKS	Stagodontidae
PIKT	Triconodontidae (Spalacotheriidae)

PIM	<i>Monodelphia</i>
PIN	Effodientia (Fodientia, Nomarthra, Tubulidentata)
PINM	Menidae
PINO	Orycteropodidae
PJ	Edentata (Bruta)
PJA	Ganodonta (Stylinodonta)
PJAC	Conoryctidae
PJAS	Stylinodontidae (Calamodontidae)
PJN	Xenarthra
PJNB	Bradypodidae
PJND	Dasyproctidae
PJNG	Glyptodontidae (Hoplophoridae)
PJNM	Megalonychidae
PJNME	Megatheriidae (Mylodontidae)
PJNMY	Myrmecophagidae
PK	Ungulata
PKA	Artiodactyla
PKB	Bunodonta
PKBA	Anoplotheriidae (Dichobunidae)
PKBC	Anthraeotheriidae (Merycopotamidae)
PKBE	Anthracotheriinae
PKBH	Hyopotaminae
PKBN	Caenotheriidae
PKBR	Helohyidae
PKC	Hippopotamidae
PKCC	Choeropsinae
PKCM	Hippopotaminae
PKCM	Homacodontidae (Agriochoeridae, Cotylopidae)
PKCO	Oreodontidae
PKCP	Pantolestidae
PKCS	Suidae (Pacochoeridae, Choeropotamidae)
PKCT	Tagassuidae (Tayassuidae, Dicotylidae)
PKCX	Xiphodontidae (Diehodontidae)
PKD	Solenodonta
PKDA	Antilocapridae
PKE	Bovidae <i>Ox, Sheep, Antelope, etc.</i>
PKEA	Alcelaphinae
PKEAU	Antilopinae
PKEB	Bovinae
PKEC	Caprinae
PKECE	Cephalophinae (Cephalophinae)
PKECF	Cervicaprinae

PKEH	Hippotraginae
PKEO	Ovibovinae
PKEP	Ovinae
PKER	Rupicaprinae
PKES	Saiginae
PKET	Tragelaphinac
PKF	Camelidae
PKG	Cervidae <i>Deer</i>
PKGc	Cervinae
PKGe	Cervulinae
PKGm	Moschinae
PKH	Giraffidae (Camelopardidae. Helladotheriidae. Sivatheriidae)
PKHP	Protoceratidae
PKHT	Tragulidae
PKI	Perissodactyla
PKIA	Amynodontidae
PKJ	Equidae <i>Horse</i>
PKJA	Anelitheriinae
PKJE	Equinae
PKJH	Hyracotheriinae
PKK	Hyracodontidae
PKKL	Lophiodontidae (Helaletidae)
PKKP	Palaeotheriidae
PKL	Rhinocerotidae (Elasmotheriidae. Caenopidae)
PRLD	Diceratheriinae
PRLE	Elasmotheriinae
PRLR	Rhinocerotinae
PRLT	Teleoceratiniae
PKM	Tapiridae
PKMT	Titanotheriidae (Brontotheriidae. Lambotheriidae. Palaeosyopinae)
PKN	Condylarthra
PKNM	Meniscotheriidae
PKNO	Mioclaenidae
PKNP	Phenacodontidae
PKNR	Pleuraspidothertiidae

PKO	Hyracoidea
PKOA	Acoelodidae
PKOH	Archaeohyracidae
PKOP	Procaviidae (Hyracidae)
PKQ	Amblypoda
PKQC	Coryphodontidae
PKQP	Pantolambdidae
PKQR	Peritychidae
PKQU	Uintatheriidae (Bathyopsidae)
PKS	Proboscidea
PKSD	Dinotheriidae
PKSE	Elephantidae
PKSF	Elephantinae
PKSG	Mastodontinae
PKT	Ancylopoda (Ancyloactyla)
PKTC	Chalicotheriidae (Ancylotheridae. Macrotheriidae)
PKTH	Homalodontotheriidae
PKTI	Isotemnidae
PKTL	Leontiniidae
PKU	<i>Notoungulata</i>
PKW	Typotheria
PKWE	Eutrachytheriidae
PKWH	Hegetotheridae (Pachyrucidae)
PKWI	Interatheridae (Protypotheridae)
PKWT	Typotheriidae (Mesotheriidae)
PKX	Toxodontia
PKXN	Nesodontidae (Atryptheridae. Protoxodontidae)
PKXT	Toxodontidae
PKY	Astrapotheroidea
PKYA	Albertogaudryidae
PKYB	Astrapotheriidae

PKZ	Litopterna
PKZA	Adianthidae
PKZM	Macraucheniidae (Mesorhinidae)
PKZN	Notohippidae
PKZP	Proterotheriidae
PL	Sirenia
PLD	Dugongidae (Halicoridae)
PLH	Halitheriidae
PLJ	Hydrodamalidae (Rhytinidae)
PLP	Prorastomidae
PLT	Trichechidae (Manatidae)
PM	Cete (Cetacea) Whales
PMA	Archaeoceti
PMB	Basilosauroidae (Zeuglodontidae)
PMG	Mysticeti (Mystacoceti)
PMH	Balaenidae
PMI	Balaenopteridae (Megapteridae)
PMO	Odontoceti (Denticeti)
PMP	Delphinidae
PMPD	Delphinapterinae
PMPE	Delphininae
PMPG	Globicephalinae
PMQ	Physeteridae (Physodontidae, Ziphiidae)
PMQK	Kogiinae
PMQP	Physeterinae
PMQZ	Ziphiinae
PMR	Platanistidae (Pontoporidae)
PMS	Squalodontidae
PN	Ferae (Carnivora)
PNA	Fissipedia
PNB	Aeluroidea
PNF	Felidae Cat
PNFF	Felinae
PNFG	Genepardinae (Cynaelurinae)
PNFM	Machaerodontinae

	hyaenidae
PNH	Protelidae
PNI	Viverridae
PNIC	Cryptoproctenae
PNIE	Euplerinae
PNIG	Galidictinae
PNIH	Herpetinaes
PNIV	Viverrinae
PNJ	Cynoidea
PNK	Canidae <i>Dog</i>
PNKC	Caninae
PNKM	Megalotinae
PNL	Arctoidea
PNM	Mustelidae
PNML	Lutrinae
PNMM	Melinae
PNMN	Musteliniae
PNN	Procyonidae
PNNN	Nasutiue
PNNP	Procyoninae
PNO	Ursidae <i>Bear</i>
PNP	Pinnipedia
PNQ	Odobenidae (Trichechidae)
PNR	Otariidae
PNS	Phocidae
PNSC	Cystophorinae
PNSP	Phocinae
PNSS	Stenorbynehinae
PO	Creodonta
POA	Ambloctonidae (Palaeonictidae)
POAB	Arctocyonidae
POC	Chriacidae (Oxyclaenidae)
POH	Hyaenodontidae
POM	Mesonychidae
POO	Oxyaenidae
POP	Proviverridae

POT	Triisodontidae
POU	Uintacyonidae
Pov	Viverravidae
PP	Glires (Rodentia)
PPA	Simplicidentata
PPB	Sciuromorpha
PPBA	Anomaliuridae
PPBC	Castoridae (Mylagaulidae)
PPBH	Haplodontidae (Aploodontidae)
PPBI	Ischyromyidae
PPBP	Pseudosciuridae
PPC	Sciuridae
PPCA	Arctomyinae
PPCS	Sciurinae
PPG	Myomorpha
PPGB	Bathyergidae
PPH	Dipodidae
PPHD	Dipodinae
PPHS	Sminthinae
PPI	Geomyidae
PPJ	Heteromyidae (Saccomyidae)
PPJD	Dipodomysinae
PPJH	Heteromyinae
PPJP	Perognathidinae
PPK	Lophiomyidae
PPM	Muridae
PPMC	Cricetinae (Hesperomyinae)
PPMD	Dendromyinae (Deomyinae)
PPMG	Gerbillinae
PPMH	Hydromyinae
PPMI	Microtinae (Arvicolinae)
PPMK	Murinae
PPMM	Myotalpinae (Siphneinae)

	ACROTOMYINAE
PPMO	Otomyinae
PPMP	Phloeomyinae
PPMR	Rhynchomysinae
PPN	Muscardinidae (Gliridae. Myoxidae)
PPNP	Pedetidae
PPNS	Spalacidae (Aspalacidae)
PPNZ	Zapodidae
PPO	Hystricomorpha
PPOA	Castoridae
PBOB	Caviidae (Hydrochoeridae)
PPOC	Chinchillidae
PPOD	Dasyproctidae (Agoutidae)
PPOE	Dinomyidae
PPOF	Eocardiidae
PPOG	Erethizontidae (Cercolabidae)
PPOH	Hystricidae
PPQ	Octodontidae (Ctenodactylidae. Loncheridae)
PRQC	Capromyinae
PRQE	Ctenodactylinae
PRQL	Loncherinae (Echymyinae)
PRQO	Octodontinae
PPT	Theridomyidae
PPU	Duplicidentata
PPV	Lagomorpha
PPVL	Leporidae
PPVO	Ochotonidae (Lagomyidae)
PQ	Tillodontia
PQA	Anchippodontidae (Tillotheridae)
PQE	Esthonychidae
PQN	Notostylopidae

PQP	Pantostylopidae
PR	Insectivora
PRA	Dermoptera
PRB	Galeopithecidae
PRD	Insectivora vera
PRE	Adapisoricidae
PRF	Chrysochloridae
PRG	Dimyliidae
PRH	Erinaceidae
PRHE	Erinaceinae
PRHG	Gymnurinae
PRK	Hyopsodidae (Lemuravidae)
PRL	Leptictidae (Ictopsidae)
PRM	Macroscelididae (Macroscelidae)
PRN	Necrolestidae
PRP	Potamogalidae
PRQ	Solenodontidae
PRS	Soricidae
PRT	Talpidae (Myogalidae)
PRTM	Myogalinae
PRTT	Talpinae
PRU	Tentrecidae (Centetidae)
PRUC	Centetinae
PRUO	Oryzorictinae
PRV	Tupaiidae
PS	Chiroptera
PSA	Megachiroptera
PSB	Pteropodidae
PSI	Microchiroptera
PSL	Megadermatidae (Nycterinae)
PSN	Natalidae
PSNO	Noctilionidae (Emballonuridae, Molossidae)
PSP	Phyllostomatidae

PSR	Rhinolophidae
Psv	Vespertilionidae
PT	Primates
PTC	Chiromyoidae
PTD	Daubentoniiidae (Chiromyidae, Cheiromyidae)
PTE	Metachiromyidae
PTF	Mixodectidae (Microsyopsidae)
PTH	Lemuroidea (Prosimiae)
PTI	Adapidae
PTJ	Anaptomorphidae
PTK	Indrisidae
PTL	Lemuridae (Nycticebidae)
PTLG	Galagininae
PTLL	Lemurinae
PTLO	Lorisinae
PTM	Megaladapidae
PTMI	Microchoeridae
PTMN	Nesopithecidae
PTMO	Notharctidae
PTMP	Plesiadapidae
PTMT	Tarsiidae
PTN	Anthropoidea
PTNA	Archaeopithecidae
PTO	Callitrichidae (Hapalidae, Mididae)
PTP	Cebidae
PTPC	Cebinae
PTPM	Myctininae
PTPN	Nyetipithecinae
PTPP	Pitheciinae
PTR	Cercopithecidae (Cynopithecidae, Semnopithecidae)
PTRC	Cynopithecinae
PTRS	Semnopithecinae

PTS	Henricosbornidae
PTT	Hominidae (Bimana)
PTV	Notopithecidae
PTW	Simiidae (Anthropomorphidae. Hylobatidae. Pithecidae)
PTZ	<i>Mammalia incertae sedis.</i> Arrange by orders and genera
P <small>U</small>	Economic zoology Arrange subdivisions, if needed, according to the order followed in the synopsis. PUU Insects (unless the books are put in OWX); PUD Fishes; PUQ Birds
	Mythological zoology See BUB

# ANTHROPOLOGY

(INCLUDING ETHNOLOGY)

Classification made by Mr. Richard Bliss, Librarian of Redwood Library, Newport, R. I.

## SYNOPSIS

General Works PW

Natural history of Man PWA

Anthropography (Somatology) PWB

Anthroponomics PWY

Anthropogeny PWZ

Prehistoric archaeology PX

Ethnology PY

Ethnography PYE

Anthropo-Sociology PYQ

Race (Social) psychology PYY

Comparative psychology PYZ

Primitive Culture (Social origin) PZ

Material PZB

Mental PZE

Folk psychology PZV

Folk lore PZW

Sophiology PZY

- Pw·1 Study
- Pw·2 Biography
- Pw·3 Bibliography
- Pw·4 History
- Pw·5 Dictionaries. Encyclopedias
- Pw·6 Compends. Tables
- Pw·7 Periodicals
- Pw·8 Societies
- Pw·9 Collections

## Pw General and miscellaneous works

### PwA Natural history of man

- PwB Anthropography (Somatology. Physical characters)
- PwBA Stature. Bodily form. *See also* PwR·6
- PwBE Proportions of the body.
- PwBR Curve of the back. (*Ensellure*)
- PwBI Steatopygia
- PwC Child. Children
  - With the local list.
- PwD Woman. Female beauty
  - With the local list.†
- PwE Cranium. Head. *See also* PWL
- PwEA Dolichocephalic type
- PwEB Brachycephalic type
- PwEG Gnathism

†The local list is to be used wherever needed even though it is not specifically mentioned in the text

PWEH	Prognathism
PWEK	Orthognathism
PWEP	Eurygnathism
PWF	Trunk and limbs
PWFA	Skeleton
PWFE	Vertebral column
PWFH	Shoulder-girdle and arms
PWFD	Pelvis and legs
PWFO	Extremities
PWFR	Muscular system
PWG	Visceral system
PWGA	Alimentary organs
PWGE	Teeth. Dentition
PWGK	Circulatory organs
PWGR	Respiratory organs
PWGV	Excretory organs
PWH	Nervous system
PWHA	Brain. Brain weight
PWHM	Organs of special sense
PWHN	Nose
PWHP	Ear
PWHR	Eye
PWHS	Organs of speech
PWI	Genital organs
PWIF	Female
PWIM	Male
PWIP	Breasts
PWIS	Sex characteristics. The sexes
Pwj	Tegumentary system <i>See also PwJP</i>

PwJA	Skin
PwJF	Finger-prints
PwJK	Hair
PwJP	Pigmentation
PwJS	Skin
PwJU	Hair
PwJW	Iris
	Deformities. <i>See PwxM</i>
PWK	Anthropometry. (Measurement)
PWKA	Instruments for measuring
PWKT	Tests
PWL	Craniometry. Cephalometry
PWM	Cephalic indices
Pwm'6	Tables
PWN	Facial indices
Pwn'6	Tables
Pwo	Other indices
PwoA	Vertical .
Pwon	Nasal
Pwor	Orbital
PWP	Cranial capacity
Pwp'6	Tables
PwQ	Local craniometry and cephalometry With the local list
PWR	Trunk and limbs
Pwr'6	Tables of height
Pwrs	Exterual sexual organs
Pws	Physiological anthropology
Pwsb	Bodily strength

PWSH	Movement
PWSL	Circulation
PWSP	Senses
PWT	Expression of the emotions
PWU	Reproduction. Embryology
PWUA	Puberty. Menstruation
PWUF	Fertility. Sterility. <i>See also MXFN</i>
PWUH	Heredity. <i>See also MX, PYRF</i>
PWUM	Crossing. Interbreeding. <i>See also MXL</i>
PVV	Effect of light and heat
PWW	Statistics (Somatological) With the local list
PWX	Pathological anthropology
PWXA	Liability to disease. Immunity
PWXC	Nervous diseases. Mental diseases
PWXF	Other particular diseases
PWXI	Pathological growths. <i>See also PWBT, PWXK</i>
PW XK	Cretinism
PWXM	Monstrosities
PWXP	Dwarfs. Pygmies. <i>See also PYGH</i>
PWXT	Degeneration
PWY	Anthroponomics
PWYA	Relation to other organisms
PWYE	Relation to environment. <i>See also PYSE</i>
PWYF	Food supply
PWZ	Anthropogeny. (Zoological anthropology)
PWZA	Comparative anatomy and physiology
PWZG	Relation to the Simiidae
PWZH	Pithecanthropus alalus

## Px Prehistoric archaeology

PxA	Antiquity of man
PxAG	Man and the glacial period. <i>See also</i> MGLYZ
PxB	Tertiary era
PxBA	Artifacts (Flints, Eoliths, etc.)
PxBL	Local remains With the local list.
PxC	Quaternary era
PxD	Palaeolithic age. Stone age.
PxDA	Cave man. Cave dwellings (Weems)
PxDE	Kitchen middens (Shell-heaps)
PxDH	Palaeoliths
PxDI	Chipped stone
PxDJ	Flake flints
PxDJR	Rejects
PxDO	Other
PxDP	Palaeolithic art
PxDS	Sepulture
PxE	Epochs
PxEA	Lower quaternary
PxEC	Chelian culture
PxEG	Achenlian culture
PxEL	Middle quaternary
PxEM	Mousterian culture
PxEP	Upper quaternary. Reindeer epoch
PxEQ	Eburnian horizon
PxER	Aurignacian culture

Pxes	Solutrian culture
Pxev	Magdalenian culture
Pxf	Special races and remains
PxeA	<i>Homo heidelbergensis</i>
Pxfe	Neanderthal man
Pxfh	Cro-magnan race
Pxfk	Grimaldi find
Pxfn	La Naulette remains
Pxft	La Truchere race
Pxfu	<i>Moulin-Quignon jaw</i>
Pxfw	Spy remains
Pxg	Local remains and palaeoliths With the local list
Pxgz	Transition to Neolithic age
Pxh	Neolithic age. Polished-stone age
Pxi	Stations. Villages and workshops
Pxia	Azilian stations
Pxie	Arisian station
Pxj	Dwellings
Pxja	Caverns. Rock shelters
Pxje	Lake dwellings
Pxjg	Crammogs
Pxjk	Fascine structures
Pxjm	Pile structures
Pxjs	Stone structures
Pxjv	Kitchen middens. (Shell-heaps)
Pxk	Neolithic sepulture
Pxka	Inhumation
Pxkc	Pre-sepulchral <i>decharnement</i>

PXKF	Burial posture
PXKI	Incineration. Urn burial
PXKN	Burial places. (Necropoli)
	With the local list
PXL	Neolithic industry. Artifacts
PXLA	Shaped stone implements
PXLB	Polished stone implements
PXLC	Weapons and utensils
PXLD	Lance and arrow heads
PXLE	Knives
PXLF	Axes
PXLG	Other implements
PXLJ	Other stone objects
PXLN	Neolithic ceramics
PXLO	Vases, Urns, etc.
PXLT	Bodily ornaments
PXLV	Garments
PXM	Neolithic art
PXMA	Sculptures
PXMG	Grottoes
PXMI	Slabs. Menhirs
PXMJ	Human figures. "Idols" <i>See also PZIQ</i>
PXML	Dolmens
PXMP	Engraving
PXMS	Neolithic commerce
PXN	Local remains and neoliths
PXO	Age of metals
PXOC	Copper
PXOG	Copper mining

PxOG	Implements
PxOT	Tin mining
PxP	Bronze
PxPP	Manufacture
PxPI	Implements
PxQ	Iron
PxQC	Smelting
PxQL	Implements
PxQL	La Halstat culture
PxQM	La Tene culture
PxR	Constructive arts. (Prehistoric) <i>See also</i> PzC Mound structures. <i>See</i> PzCF
PxRD	Dwellings. <i>See mainly</i> PxJ
PxRI	Sepulchral structures. <i>See also</i> PxU
PxRN	Defensive structures
PxRS	Stone structures. (other than Pxs)
Pxs	Megalithic monuments. (Rude stone monuments)
PxSA	Menhirs. Obelisks
PxSL	Alignments. Avenues
PxSN	Carnac
Pxt	Cromlechs. (Stone circles. Cyclooliths)
PxtA	Avebury With alphabetical arrangement
PxTE	Er-Lanic
PxtS	Stonehenge
PxU	Dolmens
PxUC	Covered alleys
PxUG	Galleries
PxUT	Tumulus-Dolmens (Barrows cairns)
PxUU	"Druidical altars" With the local list

Pxv	Local distribution of dolmens and tumuli
Pxw	Other monuments
Pxwa	Trilithous (Triliths)
Pxwg	Gateways
Pxwk	Cists. (Kistvaens)
Pxwn	Nurhagi. Talayots
Pxwr	Kurgans
Pxx	Local megalithic monuments With the local list
Pxy	Implements and weapons
Pxya	Stone
Pxyn	Bone
Pxvw	Wood
Pxz	Local exploration and research With local list.

Includes such general works as *La France préhistorique* (Pxz39), *Prehistoric remains of Kentucky* (Pxz883)

## Py Ethnology (*Volkerkunde*)

PyA	Museums (including Anthropological museums)
PyB	Photographs. Models
PyC	Actiology and evolution
PyD	Origin of man. <i>See also</i> Pwz
Pyda	Special creation theory
Pydf	Evolution theory
Pydi	Specific unity of the human race

PYDJ	Monogenetic (Single stock)
PYDK	Place of origin. "Cradle land"
PYDN	Polygenetic (Several stocks)
PYDP	Centers of creation
PYDT	Varietal diversity of the Hominidae
PYDU	Fundamental type variants Geographical distribution. Migration. <i>See</i> PYSM, PYSN
PYE	Ethnography (Races of men)
PYEC	Classification. Taxonomy
PYED	Somatological (physical) grouping
PYEF	Geographical grouping
PYEG	Linguistic grouping
PYEI	By institutions and social organization. ( <i>Ratzel</i> )
PYEJ	By arts and culture
PYEK	By musical systems ( <i>Fetis</i> )
PYEL	By mythology and religion ( <i>M. Muller</i> )
PYER	Individual classifications. Sub-arrangement by the name of the classifier.
PYF	Ethnic groups
PYG	Negroid type. ( <i>Black race</i> )
PYGA	Negroes
PYGB	Sudanese Nubians
PYGF	Bantus
PYGH	Negrillos (Pygmies)
PYGI	Bushmen
PYGK	Hottentots
PYGM	Melanessians (Oceanic negroes)

PYGN	Papuasians
PYGO	Western (Papua)
PYGR	Eastern (West Pacific islands)
PYGU	Australians
PYGY	Tasmanians
PYGZ	Negritos. (Andaman islanders)
PYH	Mongolian type. ( <i>Yellow race</i> )
PYHA	Southern mongols (Sinitic)
PYHB	Tibetan
PYHC	Burmese
PYHD	Indo-Chinese
PYHDA	Tai-Shan (Siamese, etc.)
PYHDG	Giao-Shi (Anamese. Cochin China)
PYHE	Chinese
PYHF	Oceanic mongols
PYHG	Malaya. (Indo-Malayan archipelago)
PYHGA	Proto-Malays (Batta, Dyak, Javanese)
PYHH	Madagascans
PYHI	Malays proper
PYHJ	Polynesians (Malayo-Polynesians, Kanakas)
PXHK	Northern mongols. (Mongolo-Turkees)
PYHL	Mongols proper
PXHM	Tunguses. Manchus
PYHN	Koreans
PYHO	Japanese
PYHOL	Liu-Kiu
PYHP	Tartaric group (Turkei)
PYHQ	Turks (Osmanic)
PYHR	Cossacks

PYHS	Kirghiz
PYHT	Finnic group (Finno Ugrians)
PYHU	Finns
PYHV	Bulgars
PYHW	Magyars
PYHX	Lapps
PYHY	Arctic group
PYHYC	Chuckchis
PYHYK	Kamchatdales
PYHZ	Eskimos. Aleuts
PYI	American. ( <i>Red Race</i> )
PYIA	North American

Following are the names of the principal stocks. The various tribes can be entered under their appropriate stocks, when necessary, by adding another letter to the stock mark, thus: PYIBN—Narragansetts; PYTED—Dakotas; PYIDM—Mohawks. Consult the Standard Dictionary under the word American for a full list of the tribes and Stocks.

PYIB	Athabascan
PYIC	Algonkian
PYID	Iroquoian
PYIE	Siouan
PYIF	Shoshonean
PYIG	Caddoan
PYIH	Muskhogean
PYII	Pueblo Indians
PYIJ	Hopi (Moqui)
PYIK	Zuni
PYIL	<i>Others</i>
PYILE	Eskiman (If not put in PYIV)

PYILK	Kolushan
PYILR	Salishan
PYILS	Shahaptian
PYILY	Yuman
PYIM	Hypothetical races
PYIMM	Mound-builders
PYIMT	Toltecs
PYIN	Mexican and Central American
PYIO	Nahuatlan (Aztec, Pipil)
PYIP	Huaxtean (Maya, Quiche)
PYIQ	<i>Others</i>
PYIR	South American
PYIS	Andean
PYISC	Chibuchas (Muyscas)
PYISO	Quechuan-Aymaras (Incas, etc.)
PYIT	Amazonian
PYITA	Arawaks
PYITC	Caribs
PYITM	Miranha
PYITP	Pand
PYIV	Brazilian
PYIVG	Ges (Botoctudo-Kayapo)
PYIVT	Tupi-Guarani
PYIX	Patagonian
PYIZ	Fuegian
PYJ	Caucasic ( <i>White Race</i> )
PYK	Mediterranean branch
PYKA	Semites
PYKB	Phoenicians

PYKC	Assyrians
PYKD	Arabs
PYKE	Aramaean (Syro-Chaldeans)
PYKF	Syriaus
PYKG	Jews
PYKH	Hamites
PYKI	Easteru
PYKJ	Egyptians
PYKK	Nubians
PYKL	Abyssinians
PYKLG	Gallas
PYKM	Massai
PYKN	Northern
PYKO	Berbers. Tuaregs Basques. <i>See</i> PYKV
PYKQ	Tibus
PYKR	Fulahs
PYKS	Guanches
PYKT	Northern Mediterranean group
PYKU	Iberians
PYKV	Basques
PYKW	Ligurians
PYKX	Pelasgians
PYKY	Pre-Hellenes
PYL	<i>Peoples of Aryan speech</i>
PYM	Alpine branch
PYMA	Kelto-Slavs
PYMB	Tyrolese type
PYMC	Rhaetians. Etruscans

PYMD	Kelts (Celts)
PYME	Gaels
PYMF	Kymry (Cymry)
PYMG	Picts
PYMH	French
PYMI	Spaniards
PYMJ	Portuguese
PYMK	Italians
PYML	Rumanians
PYMM	Hellenes
PYMN	Slavs
PYMNS	Sarmatians
PYMNW	Wends
PYMO	Chekhs
PYMP	Poles
PYMPG	Serbs. Croats. Bosnians
PYMQ	Albanians
PYMR	Russians
PYMS	Caucasus peoples
PYMT	Indo-Iranians
PYMU	Iranians
PYMU	Armenians
PYMU	Kurds
PYMV	Persians
PYMV	Tajiks
PYMVG	Galchas
PYMW	Afghans
PYMX	Hindus
PYMD	Dravidians

PYMXK	Kols
PYMXT	Todas. Kurumbas
PYMY	Veddas
PYMZ	Ainu
PYN	Northern (Teutonic) branch
PYNA	Bastarne
PYNB	Meso-Goths
PYNC	Tentons
PYND	Dutch
PYNG	Germans
PYNI	Belgians
PYNK	Flemings
PYNL	Frisians
PYNO	Saxons
PYNP	Anglo-Saxons
PYNS	Skandinavians
PYNT	Danes
PYNU	Norwegians
PYNV	Icelanders
PYNY	Swedes
PYO	Classification by geographic-linguistic groups. (Deniker)

*See* Deniker's Races of men for racial subdivisions. This classification is alternative one to PYF.

PYOA	Europe
PYOB	Aryans.
PYOC	Anaryans
PYOD	Asia

PYOE	Northern
PYOF	Central
PYOG	Eastern
PYOH	Indo-China
PYOR	Cisgangetic peninsula
PYOJ	Anteria Asia
PYOK	Africa
PYOL	Semito-Hamites
PYOM	Bushmen-Hottentots
PYON	Negroes. (Negrillos, Negritos)
PYOP	Madagascans
PYOO	Oceania
PYOR	Australasians
PYOS	Malaysians
PYOT	Melanesians
PYOU	Polynesians
PYOV	America
Pyow	North America
Pyowe	Eskimos. Aleuts
PYOX	Indians of Canada and the United States
PYOV	Indians of Mexico and Central America
Pyoz	South America
Pyoza	Andeans
Pyoze	Amazonians
Pyozi	Brazilians
Pyozs	South Argentines

PYP	Classification by geographical divisions
	With the local list
	Here will go works which treat of the peoples of any particular country without regard to race, as: The races of Europe (PYP30); The peoples of the Mediterranean (PYP27), The wild tribes of the Sudan (PYP725)
PYQ	Anthropo-Sociology (Social relations)
PYR	Social evolution
PYRA	Origin and descent. <i>See also</i> MYYA
PYRC	Aggregation
PYRE	Variation
PYRF	Transmission and heredity. <i>See also</i> Mx
PYRG	Social forces
PYRI	Autonomic theories
PYRJ	Psychical theories
PYRM	Social selection. Or in MYYs
PYRN	Natural selection
PYRP	Individual selection
PYRQ	Group selection. Or in MYYG
PYRS	Social progress
PYRT	Monotypic
PYRU	Polytypic
PYS	Socionomics. Socionic forces
PYSA	Intergroup intercourse
PVSC	Socionic conditions.
PYSE	Relation to environment. <i>See also</i> PWYE
PYSF	Influence of climate
PYSH	Acclimatization
PYSI	Influence of desert environment

PYSJ	Influence of oceanic environment
PYSM	Migration. Or in MYYT
PYSN	Geographical distribution. Or in MYYN
PYSP	Isolation. Or in MYYP
PYSR	Rivalry. (Commercial and hostile war)
PYSV	Accommodation
PYT	Social organization. Communities, etc.
PYTA	Anthropogenic association. (Beginnings of human society)
PYTE	Ethnogenic association. Primitive society
PYTF	The family. <i>See also JBF</i>
PYTG	Hetaerism (Promiscuity)
PYTH	Marriage
PYTHC	Bride capture. Rape. Bride purchase
PYTI	Wedding ceremonies
PYTJ	Father and child. Paternity
PYTJC	Juridical children
PYTK	Consanguine family
PYTKI	Incest
PYTL	Endogamy. Exogamy
PYTM	Punaluan family. Group marriage
PYTO	Syndyasmian (Pairing) family
PYTP	Polyandrian family. (Patriarchal family) Polyandry
PYTPN	Nair polyandry
PYTPT	Tibetan polyandry
PYTQ	Levirate Niyogo
PYTQP	“Parental” marriage
PYTR	Polygynous family (Polygyny (Polygamy)

PYTRM	Monogamous family
PYTS	Family life
PYT <sub>T</sub>	The child
PYT <sub>U</sub>	Birth
PYT <sub>V</sub>	Birth ceremonies
PYT <sub>VC</sub>	Convade
PYT <sub>VN</sub>	Nurture
PYT <sub>W</sub>	Puberty rites. Circumcisian. <i>See also</i> PZRC
PYT <sub>X</sub>	Initiation. <i>See also</i> PYVN, PZRI
PYT <sub>Z</sub>	The aged
PYU	Kinship
PYUA	Stock group
PYUB	Totem. Totemism
PYUE	Systems of consanguinity and affinity
PYUET	Turanian. Ganowanian
PYUF	Female (metronymic) kinship
PYUG	Matriarchate. ( <i>Mutterrecht</i> )
PYUH	Male (agnatic) kinship. Agnation
PYUI	Patriarchate. ( <i>Vaterrecht</i> )
PYUK	Law of succession
PYUKN	Nomenclatures
PYUKZ	Fabricated genealogies
PYUM	Adoption
PYUMA	Of a son, as first-born
PYUME	Of clan by clan
PYUMI	Of a prisoner
PYUN	Kinship organization
PYUP	Gens (Clan. Sept.) <i>See also</i> JBK
PYUR	Phratry. Curia
PYUT	Tribe. <i>See also</i> PYVH

PYUV	Confederacy. Nation
PYUZ	Local organizations With the local list
PYV	Social organization. Social life
PYVA	Horde
PYVC	House community
PYVD	Village community. <i>See also</i> HXE
PYVF	Social life
PYVH	Tribal organization. <i>See also</i> PYUT
PYVJ	Associations. Fraternities
PYVK	Cult societies
PYVL	Religious societies
PYVM	Tribal secret and semi-secret societies
PYVN	Initiation ceremonies. <i>See also</i> PYTX, PZRI
PYVP	Local associations With the local list
PYVR	Social morals
PYVS	Social taboo
PYUT	Sexual taboo
PYVU	Vendetta. Blood-feud
PYVUJ	Judicial combat
PYVW	Ordeal. <i>See also</i> KAHO
PYVX	International life
PYVY	Hostile relations. War
PYVZ	Commercial relations
PYW	Demogenic association. (Development of civil society)
PYWA	Territorial rule
PYWC	Organization of caste. <i>See also</i> HAR

PYWH	Class rule
PYWK	Secondary classes
PYW'L	Chief
PYWP	Slavery
PYWR	Feudal and democratic organization
PYWT	Forms of government
PYWX	Judicial and deliberative assemblies
<b>PYX</b>	<b>Law. Justice. Institutions</b>
PYXA	Origins. Primitive law
PYXF	Law and religion
PYXG	Ownership. Property rights
PYXI	Feudal property
PYXK	Land tenure
PYXL	Defense of property
PYXM	Inheritance
PYXMI	Inheritance and ancestor worship
PYXP	Trials. Oaths
PYXQ	Torture
PYXS	Punishment
PYXSA	Asylums
PYXSW	Wergild
PYXT	Sovereignty
PYXV	Criminal anthropology
PYXW	Descriptive criminology
PYXX	Genetic (Racial) criminology
PYXZ	Special topics
PYXZA	Abortion. Infanticide
PYXZS	Suicide

**PYY**      Race (Social) psychology *See also* Pzv

PYYA	Evolution of mind
PYYE	Mental descent. <i>See also</i> PYRA
	Inheritance
PYYE	Race experience (Spencer)
PYYG	Variation
PYYI	Selection
PYYK	Adaptation. Accommodation
PYYM	Emotions. Temperament
PYYP	Reaction times
PYYS	Relation of the sexes
PYYU	Position of woman. With the local list if needed
PYYW	Child study (primitive peoples)

**PYZ**      Comparative psychology

Man compared with the lower animals

**PY**      Primitive culture (Early civilization.  
Social origin)

PZA	Development of culture
PZAB	Degradation theory
PZAD	Development theory. Progression theory
PZB	Material culture (Primitive industry. Arts of life)
PZBA	Individual
PZBB	Tribal
PZBC	Tools. Implements. <i>See also</i> Pzbi and following entries

PZBD	Cutting. (Axes, knives, etc.)
PZBE	Abrading. Smoothing. (Scrapers, etc)
PZBF	Crushing. Pounding. (Hammers, Pestles, etc)
PZBG	Perforating. (Drills. Lathes)
PZBH	Other
PZBI	Fire-making
PZBID	Fire drill. Fire plough
PZBIP	Fire piston
PZBJ	Food
PZBJA	Anthropophagy. Cannibalism
PZBJG	Geophagy
PZBK	Cooking utensils
PZBL	Quest of food
PZBM	Capture of animals
PZBMA	Trap. Snare. Pitfall
PZBMH	Hunting with weapons
PZBN	Fishing
PZBO	Implements of the chase
PZBP	Bow and arrow
PZBPA	Arrow poison
PZBPG	Blow-gun
PZBPH	Spear. Throwing-stick. Harpoon
PZBPN	Net
PZBQ	Stimulants. Distillation
PZBR	Narcotics
PZBRT	Tobacco smoking. Pipes
PZBS	Clothing. <i>See also</i> PZBV
PZBSM	Sense of modesty
PZBT	Garments

BZBU	Head-dress
PZBV	Bodily adornment. <i>See also</i> PZBS
PZBVP	Painting
PZBVT	Tattooing
PZBW	Ethnic mutilation. Deformation
PZBWA	Head
PZBWF	Foot
PZBX	Ornaments attached to the body
PZBY	Use of skins
PZBYA	Preparation
PZBZ	Utensils
PZC	Constructive arts. <i>See also</i> PXR
PZCA	Shelter, Habitations
PZCB	Cave dwellings
PZCC	Cliff dwellings
PZCCA	Cajon structures
PZCCP	Pueblos
PZCD	Pile structures
PZCE	Huts. Houses. Tents
PZCEH	Heating and lighting
PZCF	Mounds
PZCFA	Conical ('Tumuli')
PZCFE	Sacrificial
PZCFI	Emblematic
PZCG	Earthworks. Fortifications
PZCH	Excavations
PZCHD	Dene-holes
PZCHP	Dew-ponds
PZCK	Temples. Shrines

PzCL	Sacrificial altars. Or in PzPLS
PzCN	Stone working
PzCNA	Quarrying
PzCNC	Cutting and polishing
PzCP	Pottery
PzCQ	Moulded by hand
PzCR	Modeled
PzCS	Coiled
PzCT	Ornamentation
PzCU	Utensils
PzCV	Fiber and wood Basketry. <i>See</i> PzDB
PzCW	Canoes
PzCX	Wood-carving
PzCY	Utensils
PzCZ	Primitive use of plants
PzD	Textile industry
PzDA	Weaving
PzDB	Basketry
PzDBA	Woven
PzDBK	Coiled
PzDC	Mat-making. Plaiting
PzDCN	Netting
PzDD	Spinning
PzDE	Embroidery. Ornamentation
PzDEF	Feather-weaving
PzDF	Dyeing
PzDG	Metal working. <i>See also</i> PxO
PzDGM	Primitive metallurgy

PZDH	Utensils
PZDI	Glass working
PZDK	Agriculture. Husbandry
	Dew ponds. <i>See</i> PZCHP
PZDL	Animal culture
PZDLD	Dog. Lycotechny
PZDLH	Horse. Mule
PZDM	Locomotion
PZDMA	Aids to individual locomotion
PZDML	Primitive vehicles
PZDN	Transportation
PZDO	Boats. Canoes
PZDOA	Oar. Paddle
PZDOS	Sail
PZDP	Roads. Bridges
PZDQ	Economics
PZDR	Trade. Commerce
PZDS	Barter. Money
PZDSC	Shell money. Wampum
PZDSM	Weights and measures
PZDT	Navigation
PZDU	Offensive and defensive weapons. Warfare
PZDV	Hand weapons. <i>See also</i> PZBO
PZDW	Missile weapons
PZDX	Armour
PZDY	Watch-towers
	Treatment of captives. <i>See</i> PZKP
	Classification of mankind by arts. <i>See</i> PYEJ
PZE	Mental culture
PZEA	Number systems. Counting

PZEG	Gesture counting. Hand numerals
PZEN	Numeral words
PZET	Time measurement. Chronometry
PZEX	Calendars. <i>See also</i> LSW
	With the local list
PZFR	Language (Linguistics. Glossology)
PZFA	Origin. <i>See also</i> XDAA
PZFB	Gesture language. Sign language. <i>See also</i> PZEG, XDAG
PZFE	Spoken language
PZFH	Written language
PZFI	Iconographic (Ideographic. Picture writing)
PZFJ	Symbolic
PZFK	Ionomatic
PZFL	Phonetic
PZFM	Special forms
PZFMK	Knot writing
PZFMS	Message sticks
	Grammatical structures. <i>See</i> XDH
PZG	Language by ethnical groups (Familiar etc.) <i>See also</i> XE, XV
	Can be used with the local list, though the latter is not well adapted to this usage here. It will be better to follow the ethnical grouping (PYF), adding the group or tribe letters to PZG, thus: Negro languages—PZGGA; Language of the Zuni Indians—PZGIK.
PZH	Amusements
PZHA	Toys
PCHG	Games
PZHI	Children's games
PZHJ	Games of chance. Gaming

PzHN	Sports
PzHR	Dance. Dancing
PzHS	Festal
PzHV	Pantomimic. Play acting
PzI	Esthetology (Primitive fine arts)
PzID	Drawing. Pyrography
PzIF	Painting
PzIH	Pictographs. Rock pictures. <i>See also</i> PzFI
PzIK	Carving. Engraving
PzIP	Sculpture
PzIQ	Easter Island statues
PzIS	Decoration
PzIV	Primitive symbolism in art
PzJ	Primitive music. <i>See also</i> Vv12
PzJA	Musical instruments
PzJI	Instrumental music
PzJS	Songs. <i>See also</i> Vy13
PzJW	Native music (by peoples)
	Use the group or tribe letters with the class-mark, PzJW, thus: Music of the Hopi Indians—PzJWIJ. See note to PzG
PzJX	Primitive drama. <i>See also</i> PzHV
PzK	Customs. Survivals and superstitions. <i>See also</i> Pzo
PzKA	Birth customs. <i>See chiefly</i> PYTE
PzKB	Wedding customs. <i>See also</i> PzTL
PzKM	War customs
PzKN	War dances
PzKO	Trophies. Triumphal marches
PzKP	Treatment of captives
PzKQ	Mutilation. Scalping

PzKR	Cannibalism
PzKW	Customs relating to various occupations
PzL	Occult science. <i>See also</i> Bu
PzLA	Witchcraft. <i>See also</i> Bw
PzLN	Augury. Divination. <i>See also</i> BUF.
	With alphabetical sub-arrangement
PzLNC	Chiromancy
PzLNR	Rhabdomancy
PzLO	Omens
	Astrology. <i>See</i> LRB
PzLS	Spiritism (Spiritualism). <i>See also</i> Bxs
PzM	Local manners and customs
PzN	Mythology. Religion. Animism. <i>See also</i> BTD
PzNA	Origin and development of myth (Mythogeny)
PzNC	Creation myths. Cosmogonies
PzNE	Nature myths
PzNF	Sun myth. Dawn myth
PzNG	Mood and star myths
PzNH	Myth of the winds
PzNJ	Other nature myths
PzNP	Philosophical myths
PzNPA	Ape men. Giants. Dwarfs, etc.
PzNQ	Eponymic myths
PzNR	Hero myths
PzNU	Legends
PzNY	Classification of myths
PzNZ	Local mythology. With the local list
Pzo	Animism. Origin of religion
PzoA	Ghost theory

PzOF	Doctrine of souls
PzOG	Ghost soul
PzOJ	Journey of the soul to Hades
PzOM	Feasts of the dead
PzOT	Transmigration of souls
PzOW	Mutilation of soul with body
PzP	Doctrine of spirits
PzPA	Manes worship. Ancestor worship
PzPB	Tutelar divinities
PzPC	Totemism. <i>See also</i> PyUB
PzPD	Good and evil demons. <i>See also</i> Bw
PzPDD	The devil
PzPE	Vampires. Succubi
PzPG	Nature spirits
PzPH	Fire worship. Sun worship. <i>See also</i> PzNF
PzPHA	Water worship
PzPHT	Tree worship. <i>See also</i> Bro
PzPI	Animal worship. <i>See also</i> BTO, PzPC, PyUB
PzPJ	Serpent worship
PzPL	Places of worship. <i>See also</i> BrQ
PzPLG	Groves. Temples
PzPLI	Idols
PzPLS	Sacrificial altars. Or in PzCL
PzPM	Fetishism. <i>See also</i> BTF
PzPMV	Voodooism
PzPN	Magic
PzPNI	Spells. Incantation
PzPNS	Sympathetic magic
PzPP	Shamanism

PzPQ	Shaman. Medicine man. Exorcist
PzPR	Medicine lodge
PzPS	Anthropomorphism. Idolatry
PzPT	Polytheism. Monotheism. <i>See also</i> PyA, PyG
PzPV	Mysticism
PzPX	Family and tribal religions
PzPY	Primitive religious systems. With the local list
PzQ	Rites. Ceremonies and practices
PzQA	Religious practices. Worship
PzQB	Prayer
PzQC	Sacrifice. Priesthood. <i>See also</i> BTRs, BTxs
PzQH	Human sacrifices
PzQO	Oracles. Revelations
PzQP	Expiatory rites
PzQR	Fasting. Religious exaltation
PzQT	Religious dances. <i>See also</i> PzRM
PzQV	Religious intoxication
PzQX	Religious prostitution
PzR	Symbolical rites and ceremonies
PzRC	Circumcision. <i>See also</i> PyTW
PzRE	Purification. Lustration
PzRG	Orientation
PzRI	Initiation. <i>See also</i> PyTX
PzRJ	Ceremonial mutilation
PzRM	Symbolism
PzRP	Phallic. Worship of the generative powers.
	Phallicism. <i>See also</i> BTP
PzRQ	Pre-Christian cross
PzRR	Fylfot (Swastika)

PzRT	Ceremonial dances. <i>See also</i> PzQT, PzRV
PzRU	Ceremonial chants
PzRV	Special ceremonies
PzRWF	Fire ceremony. Fire dance. Fire walking
PzRVR	Rain ceremony
PzRVS	Snake ceremony. Snake dance
PzRW	Ceremonial objects and utensils
PzRX	Masks
Pzs	Mortuary rites and customs
PzSB	Burial. Sepulture. <i>See also</i> PxBS, PxK
PzSC	Cremation. Urn burial
PzSE	Mummification. Mummy case
PzSG	Exposure
PzSI	Inhumation
PzSM	Self immolation (Sutter)
PzSP	Particular funeral customs
PzSQ	Mourning
PzT	Other ceremonies and customs
	Birth ceremonies. <i>See</i> PyTV
PzTG	Menstrual seclusion
PzTK	Courtship ceremonies
PzTL	“Bundling”
PzTN	Wedding ceremonies
PzU	Local rites and ceremonies
	With local list; or with the group or tribe mark. (See PyF) following PzU, as: Study of Siouan cults—PzUIE

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## Pzv Folk psychology (*Volkerpsychologie*) *See also PYY*

PzVA	Evolution of national characteristics
PzVE	Effects of climate on national characteristics
PzVI	Primitive mental processes
PzVN	Ethics
PzVO	Origin of moral sense
PzVS	Social ethics
PzVU	Family ethics

## Pzw Folk-lore. (*Volkskunde*) *See also BU*

Pzw'4	History
Pzw'5	Dictionaries
Pzw'7	Periodicals
Pzw'8	Societies
Pzw'9	Collections
PzWA	Weather-lore
PzWC	Plant lore
PzWE	Animal lore and fables
PzWG	Superstitions, beliefs and practices. <i>See also PZH</i>
PzWGA	Amulets. Charms
PzWK	Traditional and local customs With the local list
PzWL	Fairy tales
PzWN	Folk sayings. Proverbs
PzWP	Fortune telling
PzWQ	Dream books

Pzwr	Riddles
Pzws	Nursery rhymes
Pzwt	Place rhymes
Pzwu	Ballads. <i>Better in YN</i>
Pzv	Folk-songs. <i>Better in YY</i>
Pzwx	Folk-tales. Hero stories. <i>See also Pznr</i>
Pzwy	Folk-lore about children
Pzwz	Folk-lore about women
Pzx	Local folk lore

With the local list

## Pzy Sophiology. Primitive arts and sciences (Exclusive of Pzb—Pze)

Pzya	Astronomy
Pzyg	Geography
Pzym	Mathematics
Pzyr	Medicine and surgery
Pzyrc	Craniotomy

## Pzz Local anthropology and ethnology

With the local list

This includes Somatology, Prehistoric archaeology,  
and Sociology, by countries or peoples.







