COENOSES 11(1):3-28 , 1996

BIBLIOGRAPHY OF *COENOSES* (VOLUMES 1-10)

Ladislav Mucina & Dagmar Mucina

Institute of Botany, University of Vienna, Rennweg 14, A-1030 Wien, Austria;
e-mail: MUCINA@S1.BOTANIK.UNIVIE.AC.AT

Keywords: Bibliography, Coding, Environmental statistics, Feoli, Journal, Literature search, Multivariate analysis, Orlóci, Scientific publishing, Theory of vegetation science.

Abstract: A bibliography of 178 papers, editorials and notes published in *Coenoses* volumes 1-10 (1986-1995) is presented. It contains several indices featuring the sources (summary information on papers), authors, disciplines, geography, ecosystem type as well as an extensive list of keywords.

The scope and aims of *Coenoses*

Coenoses was founded by Prof. Enrico Feoli (Trieste, Italy) and Prof. László Orlóci (London, Canada) in 1986 as a new scientific journal devoted to community research and "to serve as an international forum for an interdisciplinary dialogue regarding the theoretical bases of community studies, methods and research results" (cited from the Scope and Objective of the Journal). Coenoses publishes original scientific works, review papers, reports of meetings, information on new software tools, and short notes and editorials. Structure and function of biotic communities, as well as population-biological studies, are the declared main core of publishing in the pages of Coenoses.

The first issue of the journal was published by Proxima (Trieste), and later ones by Edizioni Lint (Trieste). Since volume 7, publication of the journal has been in the hands of C.E.T.A. (International Center for Theoretical and Applied Ecology), a private research institute located in Gorizia, Italy. The sponsors of the journal are Consiglio Nazionale delle Ricerche (CNR), the University of Trieste, Regione Autonoma Friuli-Venezia Giulia, and the Province of Gorizia. László Orlóci served at the beginning as Secretary and later as Editor-in-Chief, while Enrico Feoli acted as Managing Editor. Starting with volume 11, Norm Kenkel (Winnipeg, Canada) takes over as Editor-in-Chief.

Every new journal is strongly shaped by its founders. Both L. Orlóci and E. Feoli rank among the leading personalities in numerical and statistical data analysis in ecology. Topic areas such as the application of multivariate and univariate statistics, mathematical modelling, data-banking, and GIS applications became, and continue to be, the leading themes of Coenoses. By focusing on the development of new methods for the treatment of data in ecology, taxonomy and population biology, the journal has filled an important niche in the ecological publishing landscape (see the indices 'Scientific Disciplines' and 'Methods' below). Papers examining theoretical aspects of ecology, and vegetation science in particular, predominate. Although the journal has published ca. 20 papers featuring zoological topics, a future challenge for Coenoses is to broaden its scope and to focus more on animal populations and communities.

The authors of papers published in Coenoses come from many countries, with Canada, Italy, Hungary, USA, South Africa and several Third World countries (e.g. Argentina, China, Ethiopia, Sudan) making up the most of the published material. The strong impact of the works of L. Orlóci and N. Kenkel (Canada), W. Conley and G. Patil (USA), E. Feoli (Italy), M. B. Dale (Australia) and J. Podani (Hungary) is indisputable. The association of the journal with the University of Trieste, the International Centre for Science and Technology, the International Institute for Theoretical Physics, the Third World Academy of Sciences, and C.E.T.A. (all institutions located in Trieste or Gorizia, and connected through the personality of Enrico Feoli) has fostered strong links between Coenoses and science in the Third World. The abovementioned organizations, as well as the Summer Schools of the International Association for Vegetation Science (headed by László Orlóci), have organized a number of scientific meetings, modelling courses, and hands-on workshops that have brought together experts in theoretical ecology and numerical data analysis with colleagues from Africa, China, South America, and Eastern Europe (which at the time were still isolated by the Iron Curtain).

Preparation of the bibliography

The bibliography was produced using Sci-Mate (Institute for Scientific Information, Philadelphia, USA), a software package for entering, searching, and retrieving bibliographic items (e.g. paper citations), and for automatically producing and editing reference lists. The program also composed the citation formats used in preparing the Source Index. Each entry (bibliographic citation) in the Sci-Mate data bank contains the name(s) of the author(s), title, source (journal, proceedings), volume, pages, year, editors (optionally in the case of proceedings and compendia), place of publication, publisher (also optionally in the case of books) and keywords (excluding words in the title). Additional fields coded for syntaxa, disciplines, ecosystems, and geographic units for each article.

The program BIBIND (Jürgen Geißelbrecht, Wien) was used to produce indices based on various fields containing codes for disciplines, ecosystems, and geographic units. BIBIND was also used to combine keywords with words (or groups of words) in article titles to form a common Keyword Index. The indices produced by BIBIND were subsequently edited to improve user-friendliness.

Structure of the bibliography

The bibliography consists of the following indices: Source Index, Authors Index, Discipline Index, Geography Index, Ecosystem Index, and Keyword Index.

Source Index

The Source Index contains references to all papers published in Coenoses volumes 1-10. All publication entities, including scientific papers, editorials, introductions to special volumes, obituaries, etc. have been included. Book reviews and two preceding bibliographies are not considered.

Each item is introduced by a running number. In total 178 papers are covered. The name(s) of the author(s) follow(s) in the next line. Since users often look for papers using authors as the main guideline, author(s) names are given in bold. The title of the paper is given next, followed by the year, volume and pagination as a separate entry. Unlike preceding Coenoses indices, titles are given using both capital and lowcase letters. A list of keywords (headed by the abbreviation "KW") is given. To save space, keywords are presented as a line-ordered list. Disciplines (DI), geography (GG) and ecosystem (EC) codes follow, each on a separate line. All other indices have been derived from the Source Index using the above-mentioned software.

Authors Index

All authors, regardless of their position in joint-authored papers, are given in alphabetic order. Family name is given first, followed by initials. Names of Chinese and Ethiopian colleagues are given in full. The running number(s) of papers follows the name of each author.

Discipline Index

This index lists, in alphabetical order, the codes for scientific disciplines featured in the papers; the running numbers of the relevant papers follow this code. The coding system differs somewhat from that used in previous Coenoses indices. Codes are summarized in Table 1.

Geography Index

Like the preceding Index, the Geography Index contains an alphabetic sequence of codes for countries (including independent state units) as well as large-scale geographic units such as continents and subcontinents. Each is followed by the running numbers of pertaining papers. Codes are summarized in Table 2.

Ecosystem Index

The ecosystem types dealt with in particular papers are listed (by abbreviations), followed by the running numbers of the relevant papers. The three-letter ecosystem codes are summarized in Table 3.

Keyword Index

This extensive index contains entries derived from both aricle titles and the KW-section of the Source Index. Entries are ordered alphabetically, and are followed by the running numbers of relevant papers. The Latin names of organisms and syntaxa are printed in italics.

Acknowledgements: We thank Jürgen Geißelbrecht for the computer programme BIBIND, Norm Kenkel for valuable information and corrections, and Enrico Feoli for encouragement. We dedicate this bibliography to our friend, Professor László Orlóci, the founder and editor of Coenoses.

Source Index

1
Goodall, D.W.
Classification and ordination: their nature and role in taxonomy and community studies.
1986, 1: 3-9
DI: NUM, VEG, ORD, NCL, SYS, TAX, GRD, MOD, RES, THE

2
Kenkel, N.C.
Report on: 'Numerical Methods in the Study of Vegetation Systems'.
1986, 1: 10
KW: Zürich, meeting
DI: VEG, HIS, EDU, NUM, VEG
GG: EUA, CH

3
Orlóci, L., Feoli, E., Lausi, D. & Nimis, P.L.
Estimation of character structure convergence (divergence) in plant communities: a nested hierachical model.
1986, 1: 11-20
KW: character set, profile
DI: NUM, MUL, STA, EVO, VEG, THE, SYS, MOD

4
Lachance, M.A. & Starner, W.T.
The community concept and the problem of non-trivial characterization of yeast communities.
1986, 1: 21-28
KW: PCA
DI: NUM, MIC, INF, STA, ORD

5
Wildi, O.
The relational model for data bases in community studies.
1986, 1: 29-34
KW: relational data bank
DI: THE, VEG, NUM

6

Dale, M.B., Beatrice, M., Venanzoni, R. & Ferrari, C.
A comparison of some methods of selecting species in vegetation analysis.
1986, 1: 35-51
KW: species reduction, constancy, fidelity, discrimination, uniformity, correlation, specificity, cost, concordance, compositional similarity, order similarity, partition comparison, matrix comparison, compatibility, robust, resistant
DI: NUM, ORD, RES, STA, MUL, THE, VEG, MET
EC: FOR, SAL
GG: EUS, IT

7
Stofella, S.L.
Report on: 'Numerical Methods to Analyze Vegetation Data'.
1986, 1: 52
KW: Rosario, meeting
DI: VEG, NUM, MUL, EDU, HIS
GG: ALT, AR

8
Feoli, E. & Ganis, P.
Autocorrelation for measuring predictivity in community ecology: an example with structural and chorological data from mixed forest types in NE Italy.
1986, 1: 53-56
KW: Friuli
DI: THE, VEG, PAT, NUM, STA, MOR, LIF, GEO
EC: FOR
GG: EUS, IT

9
Swindel, B., Lloyd, R., Patil, G.P., Taillie, C. & Conde, L.
U.S. National Forest Management Act, forest ecosystems diversity, and diversity profiles.
1987, 2: 1-8
KW: clear-cutting, Douglas fir, intrinsic diversity orderings, pine
DI: DIV, MOD, STA, DYN
EC: FOR, BOR
GG: AMN, US

10
Podani, J.
Computerized sampling in vegetation studies.
1987, 2: 9-18
KW: computer, simulation, estimation, plot size, transformation, autophenetic, sampling, symphenetic
DI: PAT, NUM, ORD, INF, NCL, MUL

11
Hinch, S.G. & Somers, K.M.
An experimental evaluation of the effect of data centering, data standardization, and outlying observations on principal component analysis.
1987, 2: 19-23
KW: transformation, PCA, correlation
DI: NUM, STA, MOD, ORD, GRD, RES

12
Kenkel, N.C. & Booth, T.
A comparison of presence-absence resemblance coefficients for use in biogeographical studies.
1987, 2: 25-30
KW: NMDS
DI: NUM, MUL, RES, GEO, ORD

13
Jancey, R.C. & Wells, T.C.
Locality theory: the phenomenon and its significance.
1987, 2: 31-37
KW: species ranking
DI: RES, NUM, MUL, VEG, DYN, NCL
EC: BOR
GG: AMN, CA

14
Michaelsen, J., Davis, F.W. & Borchert, M.
A non-parametric method for analyzing hierarchical relationships in ecological data.
1987, 2: 39-48
KW: variable set, probability, non-parametric, cross-validation, California
DI: NUM, INF, NCL, STA, DIS
EC: MES
GG: AMN, US

15
Carnevale, N.J., Torres, P., Boccanelli, S.I. & Lewis, J.P.
Halophilous communities and species distributions along environmental gradients in southeastern Santa Fé Province, Argentina.
1987, 2: 49-60
KW: PCA
DI: NUM, GRD, PED, ORD, RES
EC: SAL
GG: ALT, AR

16
Orlóci, L.
Flexible gradient analysis: a note on ideas and an application.
1987, 2: 61-65
KW: sampling
DI: NUM, GRD, ORD, PED, RES, MET
EC: MIR
GG: EUA, CH

17
Fewster, P.H.
Regression modelling of perturbation in some vegetation types.
1987, 2: 67-74
KW: response
DI: NUM, STA, RES, ORD, MOD
EC: BOR
GG: AMN, CA

18
Bredenkamp, G.J.
An overview of the major plant communities of the Manyeleti Game Reserve, Gazankulu, South Africa.
1987, 2: 75-84
DI: VEG, SYS
EC: ARI, SAV
GG: AFS, ZA

19
Russo, T.

Parental and oblique transmission and interaction between traits in the evolution of non-genetic traits: suggestions for a cultural ecology.
1987, 2: 85-95
KW: epidemics, diffusion
DI: NUM, GEN, EVO, MOD, COM

20
Goodall, D.W. & Feoli, E.
Application of probabilistic methods in the analysis of phytosociological data.
1988, 3: 1-9
KW: association, hierarchy
DI: NUM, INF, RES, NCL, SYS, THE, VEG, MET
EC: ALP
GG: EUS, IT

21
Editors
Report on: "Statistical and Computational Ecology": an international workshop.
1988, 3: 10
KW: Las Cruces, meeting
DI: EDU, VEG, STA, NUM
GG: AMN, US

22
Dale, M.B.
Knowing when to stop: cluster concept - concept cluster.
1988, 3: 11-32
KW: splitting line, graph, test, interpretation, geometry
DI: NUM, MUL, MET, NCL, STA

23
Camiz, S.
Expert systems: utility in community studies and examples.
1988, 3: 33-40
KW: table sorting, NMDS, eigenanalysis
DI: NUM, SYS, ORD, MUL, NCL

24
Petrakis, P.
DAPROPHECO: a specialized database system for integrated studies in plant-hemiptera communities.
1988, 3: 41-53
KW: software
DI: NUM, ZOO, ORD, MUL, NCL

25
Hull, V. & Lagonegro, M.
AQUAMOD: an introductory purpose simulation model of plankton dynamics.
1988, 3: 55-60
KW: simulation, software
DI: HYD, MOD, NUM, DYN, PLN
EC: LAC, AQU
GG: EUS, IT

26
Bartoli, A. & Massari, G.
Sampling mycocoenoses.
1988, 3: 61-68
KW: mycocoenology, sampling design, size of sample, number of units
DI: CRY, MYC, PAT, THE, MET, STA

27
André, H.M.
Variable centered methods and community classification.
1988, 3: 69-78
KW: TABORD, clustering, comparison of classifications, DCA, Tennessee watershed data
DI: NUM, MUL, NCL, RES, ORD, ZOO, MET
EC: FOR
GG: AMN, US

28
Feoli, E., Ganis, P. & Zerihun Woldu
Community niche, an effective concept to measure diversity of gradients and hyperspaces.
1988, 3: 79-82
KW: beta diversity
DI: THE, VEG, ECO, COM, GRD, DIV, RES
EC: FOR
GG: AFE, ET

29
Mucina, L., Čík, V. & Slavkovský, P.
Trend surface analysis and splines for pattern determination in plant communities.
1988, 3: 89-105
KW: TSA, bicubic splines, approximation, interpolation, triangular, *Persicaria*, canonical, kriging
DI: THE, VEG, PAT, NCL, ORD, PED, POP
EC: RUD, MIR
GG: EUC, CS, SK, EUB, BG

30
Kenkel, N.C.
Introduction to Data Analysis: a comprehensive program package for personal computers.
1988, 3: 107-109
KW: software
DI: THE, VEG, NUM, MUL, ORD, NCL, POP, STA, DYN

31
Carleton, T.J.
DENT: A Pascal program for vegetation data entry into microcomputers.
1988, 3: 110
KW: software
DI: NUM, NCL, MUL, NCL, ORD

32
Podani, J.
SYN-TAX III. A package of programs for data analysis in community ecology and systematics.
1988, 3: 111-119
KW: sampling, association analysis, software, comparison, concensus, ranking, symphenetic, PCA, PCO, AOC, correspondence analysis
DI: NUM, MUL, VEG, THE, MET, PAT, NCL, ORD, INF

33
Dale, M.
Mutational and nonmutational similarity measures: a preliminary examination.
1988, 3: 121-133

KW: transformation, partitions, topology, Levenstein, fuzzy set, Rajski
DI: NUM, MUL, NCL, MET, RES, MOD

34
Herben, T. & Liška, J.
The use of multi-way contingency tables for the study of epiphytic lichen distribution.
1988, 3: 135-139
KW: *Lecanora*, ANOVA
DI: NUM, MUL, NCL, CRY, STA, LIC
EC: EPI
GG: EUC, CS, CZ

35
Feoli, E. & Zuccarello, V.
Syntaxonomy: a source of useful fuzzy sets for environmental analysis?
1988, 3: 141-147
KW: *Salicetea herbaceae*, *Caricetea curvulae*, fuzzy sets
DI: SYS, NUM, MUL, GRD, ORD, DYN
EC: ALP, GRA
GG: EUS, IT

36
Levins, R. & Puccia, C.J.
The controlling factor in biological communities.
1988, 3: 149-154
KW: loop, density, null hypothesis
DI: THE, ECO, POP, DYN, INT, MOD

37
Biondini, M.E., Mielke, P.W. & Redente, E.F.
Permutation techniques based on Euclidean analysis spaces: a new and powerful statistical method for ecological research.
1988, 3: 155-174
KW: non-linearity, software
DI: NUM, MUL, MET, STA, VEG

38
Kostoris, A.
Assessment of DBH normality based on plotless sampling.
1988, 3: 175-180
DI: SIL, THE, MET, STA, NUM

39
Podani, J.
A method for generating consensus partitions and its application to community classification.
1989, 4: 1-10
KW: relocation, SLC, SAHN, MINFO, CLC
DI: NUM, MUL, SYS, NCL, MET
EC: GRA
GG: EUC, HU

40
Jancey, R.C.
The measurement of non-linear association in community descriptor sets.
1989, 4: 11-13
KW: SLC
DI: NUM, MUL, RES, NCL

41
Shaukat, S.S. & Uddin, M.
A comparison of principal component and factor analysis as ordination models with reference to a desert ecosystem.
1989, 4: 15-28
KW: PCA, NMDS, orthogonal
DI: NUM, ORD
EC: DES
GG: ASI, PK

42
Lepš, J., Soldán, T. & Landa, V.
Multivariate analysis of compositional changes in communities of *Ephemeroptera* (*Insecta*) in the Labe Basin, Czechoslovakia - a comparison of methods.
1989, 4: 29-37
KW: DCA, TWINSPAN, transition matrix
DI: NUM, MUL, ZOO, DYN, NCL, ORD
EC: FLU, LAC
GG: EUC, CS, CZ

43
Yu, S.X. & Orlóci, L.
Species dispersions along soil gradients in a *Cryptocarya* community, Dinghushan, south China.
1989, 4: 39-45
KW: niche, canonical, dispersion profiles
DI: PED, GRD, COM, NUM, ORD
EC: FOR
GG: ASE, CN

44
Franceschi, E.A.
Distribution of herbaceous communities of the river Paraná valley along an elevation gradient after a catastrophic flood.
1989, 4: 47-53
KW: PCA, SSC
DI: GRD, GEO, NUM, MUL, WAT, ORD, NCL
EC: FLU, TRO, FLO
GG: ALT, AR

45
Dulová, M. & Okáli, I.
Statistical evaluation of biocoenotic records: SOFIS and the *Auchenorrhyncha* file.
1989, 4: 55-58
KW: data bank, Bratislava
DI: ZOO, NUM
GG: EUC, CS, SK

46
Kenkel, N.C.
Report on: The International Workshop on Mathematical Community Ecology.
KW: meeting
1989, 4: 59-60
DI: NUM, MAT, EDU, VEG, HIS
GG: EUS, IT

47
Egziabher, T.B.G.
The environmental variables which led to the ecological crisis in Ethiopia.
1989, 4: 61-67

KW: highlands, Great Rift Valley, evergreen montane forests, combretaceous deciduous woodlands, microphyllous woodlands, evergreen scrub, Vavilov centre, multiethnic, multi-religious society, debtera, shimaglle, serfs, chewa, neftenna
DI: ENV, CLI, HUM, HIS
EC: ARI, TRO, DES, FOR
GG: AFE, ET

48
Kenkel, N.C.
Report on "Sampling and Data Analysis in Mediterranean Macchia Vegetation".
1989, 4: 68
KW: IAVS, meeting
DI: NUM, WHO, HIS, VEG, EDU
EC: MES
GG: EUS, IT

49
Adler, G.H. & Wilson, M.L.
Insular distributions of voles and shrews: the rescue effect and implications for species co-occurrence patterns.
1989, 4: 69-72
KW: *Blarina*, mammals, loop
DI: ISL, ZOO, POP, INT
GG: AMN, US

50
Reich, R.M.
Sampling simulation with a microcomputer.
1989, 4: 73-80
KW: inventory, software
DI: PAT, NUM, MOD, THE, MET, ECO

51
Rinaldi, M.G. & Rinaldi, S.
Acid deposition and catastrophes in forests: a tree-nutrient model.
1989, 4: 81-90
KW: equilibrium, fold catastrophe
DI: ENV, MOD, NUT, STB
EC: FOR

52
Niven, B.S.
The ecosystem as an algebraic category: a mathematical basis for theory of community and ecosystem in animal ecology.
1989, 3: 83-87
KW: treehole
DI: MAT, ZOO, THE, ECO, TER

53
Stergiou, K.I.
A method to cope with collinearity of ecological data sets in community studies.
1989, 4: 91-94
KW: factor analysis
DI: NUM, MUL, ZOO, HYD, STA, MET, MAR
EC: SEA
GG: EUS, GR

54
Marsili-Libelli, S.
Fuzzy clustering of ecological data.
1989, 4: 95-106
DI: NUM, NCL, MUL, PHY, PHO

55
Díaz, S. & Acosta, A.
Floristic and diversity changes in the phanerophytic vegetation of Copacabana watershed (central Argentina) as a response to disturbance.
1989, 4: 107-111
KW: DCA
DI: DIT, DIV, ENV, GRB, ORD
EC: GRA, TRO
GG: ALT, AR

56
Czárán, T.
Coexistence of competiting populations along an environmental gradient: a simulation study.
1989, 4: 113-120
KW: cellular automata, response
DI: COM, POP, DYN, DIS, GRD, THE, VEG, PAT

57
Margalef, R.
On diversity and connectivity, as historical expressions of ecosystems.
1989, 4: 121-126
DI: THE, ECO, DIV, COX

58
Niven, B.S.
The animal niche: a formalized functional definition and its use in classifying niches.
1989, 4: 127-135
DI: COM, ZOO, THE, ECO

59
Neet, C.R.
Niche overlap measures and hypothesis testing: a review with particular reference to empirical applications.
1989, 4: 137-144
DI: RES, COM, THE, MET, ECO

60
Ying-Hen Hsieh
Evolution of altruistic communities.
1989, 4: 145-147
KW: Von Foerster equations, altruistic ratio, fecundity function
DI: EVO, MOD, POP, ECO, THE, MAT

61
Banyikwa, F.F.
Species-habitat relationships in the Serengeti short grasslands, Tanzania.
1989, 4: 149-152
KW: topography
DI: NUM, ORD, GRD, GMO
EC: SAV
GG: AFE, TZ

62
Van Tilborgh, T., van Straaten, D., Van Hecke, P. & Verheyen, R.
Small-scale analysis of a marsh vegetation fed by seepage.
1989, 4: 153-162

KW: microtopography, species association, species juxtaposition, species region, plexus
DI: GMO, PAT, RES, VEG, NUM
EC: WET, MIR
GG: EUW, BE

63
Shaukat, S.S.
A technique for species weighting and its utility in data reduction and minimization of misclassification.
1989, 4: 163-168
KW: sum of squares, data reduction
DI: THE, VEG, MET, NUM, NCL
EC: URB, RUD
GG: AMN, CA

64
Boryslawski, Z. & Krusińska, E.
Fuzzy linguistics concept in redescription of vegetation data.
1989, 4: 169-173
THE, VEG, NUM, ORD

65
Kenkel, N.C.
Report on "Numerical Methods and Models in Vegetation Biology".
1989, 4: 174
KW: León, IAVS, meeting
DI: VEG, HIS, NUM, MOD, EDU
GG: EUW, ES

66
Goodall, D.W.
Simulation modelling for ecological applications.
1989, 4: 175-180
KW: sensitivity, validation
DI: THE, ECO, MOD

67
Giavelli, G., Bodini, A. & Rossi, O.
An extension of the complexity concept derived from the analysis of colonisation processes in small island environments.
1990, 5: 1-5
DI: THE, ECO, MOD, STB, COX, ISL, DYN

68
Ulanowicz, R.E. & Puccia, C.J.
Mixed trophic impacts in ecosystems.
1990, 5: 7-16
KW: beneficial predators, Chesapeake Bay, trophic structure, effect of predation, indirect competition, indirect mutualism, input-output analysis, loop analysis, networks of carbon flows
DI: THE, ECO, MOD, COM, ENE

69
Podani, J.
Comparison of fuzzy classifications.
1990, 5: 17-21
KW: consensus, distance, minimum length sequence metrics, partitions
DI: NUM, NCL, THE, MET, RES, MUL

70
Ganesalingam, S.
Likelihood approach to clustering using unclassified initial sample.
1990, 5: 23-31
KW: linear discriminant function, normal distribution mixture, mixture and separate sampling, maximum likelihood estimates, simulation comparison
DI: NUM, MUL, NCL, STA, MET

71
Jain, R.K.
Fish species diversity and its relationship to distance from the coast line.
1990, 5: 33-35
DI: DIV, THE, ZOO, MAR
EC: SEA

72
Fischer, H.S.
Simulating the distribution of plant communities in an alpine landscape.
1990, 5: 37-43
KW: Davos
DI: MOD, SYS, LAN, GEO, MAP
EC: ALP
GG: EUA, CH

73
West, N.E. & Hatton, T.J.
Relative influence of observer error and plot randomization on detection of vegetation change.
1990, 5: 45-49
DI: NUM, ORD, VEG, DYN, THE, MET, STA

74
Wildi, O.
Sampling with multiple objectives and the role of spatial autocorrelation.
1990, 5: 51-60
KW: simulation, Davos
DI: NUM, PAT, MOD, MET, STA
EC: ALP
GG: EUA, CH

75
Di Pasquale, C.
A game theory model for food webs: time dependence in a predator/prey system.
1990, 5: 61-67
KW: graph
DI: THE, MET, WEB, ECO, MOD, PPR

76
Lepš, J., Straškraba, M., Husák, Š. & Boháč, J.
Classification of sequences in community ecology - three case studies.
1990, 5: 69-77
KW: phytoplankton, soil macrofauna, TWINSPAN
DI: THE, VEG, SYS, NCL, ZOO, PLN
EC: WET
GG: EUC, CS, CZ

77
Palmer, M.W.
Spatial scale and patterns of species-environment relationships in hardwood forest of the North Carolina Piedmont.
1990, 5: 79-87

KW: geostatistics, self-similarity, fractal, Duke Forest, calcium, semi-variogram, detrending, CCA
DI: NUM, ORD, GRD, PAT, RES
EC: FOR
GG: AMN, US

78
Palmer, M.W.
Spatial scale and patterns of vegetation, flora and species richness in hardwood forests of the North Carolina piedmont.
1990, 5: 89-96
KW: Monte Carlo, floristic pattern, DCA
DI: NUM, ORD, PAT, DIV
EC: FOR
GG: AMN, US

79
Bouxin, G.
The measurement of horizontal patterns in vegetation: a review and proposals for models.
1990, 5: 97-112
KW: distance, non-parametric test, plurispecific, monospecific, sampling, dispersion index, contagion index
DI: NUM, THE, VEG, PAT, STA, MOD

80
Carnevale, N.J. & Torres, P.S.
The relevance of physical factors on species distribution in inland salt marshes (Argentina).
1990, 5: 113-120
KW: canonical correlations, interspecific competition, physical factors, plasticity
DI: GRD, ORD, NUM, COM, AUT
EC: SAL
GG: ALT, AR

81
Luboobi, L.S.
A population of insects infesting a stored quantity of wheat.
1990, 5: 121-124
KW: *Sitophilus*, *Triticum*, weevils, critical food ration, delay differential equations
DI: POP, INT, MOD

82
Li Dianmo & Chen Xiaofeng
Forest pest management strategies based on community models.
1990, 5: 125-129
KW: pest-host interaction, pine tree, pine caterpillar
DI: SIL, MOD, THE, ENV, INT, ZOO, MAT, COM

83
Szathmáry, E., Hegedüs, C., Németh, G., Molnár, I. & Vida, G.
The engangement of the Red Queen and King Midas in the phylogenerator model.
1990, 5: 131-141
KW: cladograms, ecological interactions, coevolution, extinction, simulation, speciation
DI: EVO, THE, MOD, GEN, DIV, CLA

84
Cabrera-Febola, W.
Model of the spatial structure of rocky shore communities.
1990, 5: 143-147
KW: Ancona beach, lattices, spatial distribution, Hassés diagram
DI: MOD, PAT, THE, MAT, ECO, COM

85
Kenkel, N.C.
Spatial competition models for plant populations.
1990, 5: 149-158
KW: Dirichlet, *Picea*, forestry, neighbour, nucleation, process, tessellation, Delaunay triangulation
DI: COM, THE, PAT, NUM, POP, MET
EC: BOR
GG: AMN, CA

86
Yu, S.X. & Orlóci, L.
On niche overlap and its measurement.
1990, 5: 159-165
KW: similarity, *Cryptocarya* forest, Dinghushan
DI: COM, RES, NUM, NCL, THE, VEG, ECO
EC: FOR, TRO
GG: ASE, CN

87
Anonymous
Report on Methods and Models in Landscape Ecology.
1990, 5: 166
KW: ICE project, CETA, Gorizia, meeting
DI: EDU, VEG, HIS, MOD, MET, ECO, LAN
GG: EUS, IT

88
Bredenkamp, G.J. & Theron, G.K.
The vegetation of the fersiallitic soils of the Manyeleti Game Reserve.
1990, 5: 167-175
KW: conservation area, edaphic gradient, Transvaal Lowveld
DI: SYS, NUM, ORD, GRD, PED, CON
EC: SAV
GG: AFS, ZA

89
Conley, W.
An "Institute for Theoretical Ecology" - Part I: What is "theoretical ecology" and why do we need it?
1990, 5: 177-179
KW: statistical ecology, mathematical ecology, research funding
DI: SCI, HIS, EDU, THE, ECO, NUM, STA, MAT

90
Editors
From the editors of Coenoses.
1991, 6: 1
KW: editorial
DI: SCI, HIS, BIB
GG: EUS, IT

91
Camiz, S.
Reflections on spaces and relationships in ecological data analysis: effects, problems, possible solutions.
1991, 6: 3-13
KW: horseshoe, CCA, PCA, NMDS
DI: NUM, ORD, VEG, THE, MET

92
Qiong Gao
The minimum description length principle as applied to multivariate clustering analysis with isodata.
1991, 6: 15-20
DI: NUM, VEG, MUL, NCL, THE, MET

93
Acosta, A., Díaz, S. & Cábido, M.
Patch structure in natural grasslands of Córdoba Mountains (Argentine) in relation to different rock substrates.
1991, 6: 21-27
KW: community pattern, montane grasslands, patchiness, TWINSPAN, DCA
DI: DIV, SYS, NCL, NUM, ORD
EC: GRA
GG: ALT, AR

94
Palmer, A.R.
Vegetation/environment relationships in the central area of the Cape Midlands, South Africa.
1991, 6: 29-38
KW: karoo, rainfall, altitude, PCA
DI: SYS, NUM, ORD, CLI, PED
EC: ARI
GG: AFS, ZA

95
Estabrook, G.F.
The size of nature reserves and the number of long lived plant species they contain.
1991, 6: 39-45
KW: natural area, species richness, reserve size, stress tolerance, recursion
DI: DIV, CON, THE, ISL

96
Franceschi, E.A. & Lewis, J.P.
Early stages in the Paraná River tall grassland recovery after an extraordinary flood.
1991, 6: 47-52
KW: catastrophic events, community regeneration, *Panicum prionitis*
DI: DIT, VEG, DYN, ORD, SYS, NCL
EC: SAV
GG: ALT, AR

97
Conley, W.
An Institute for Theoretical Ecology? Part II: The concept of "Center" - critique and a new design.
1991, 6: 53-60
KW: mathematical ecology, research funding, inter-disciplinary research
DI: THE, VEG, MAT, STA, EDU, SCI, ECO

98
Feoli, E. & Orlóci, L.
The properties and interpretation of observations in vegetation study.
1991, 6: 61-70
DI: THE, VEG, PAT, INF, NUM, NCL, ORD, MET

99
Cavallini, F.
Parameter-dependent equilibria in dynamic models of ecological communities. A qualitative approach with MACSYMA programs.
1991, 6: 71-78
KW: Jacobian matrix, qualitative modelling, symbolic computation, qualitons
DI: ECO, MOD, STB, MAT, THE

100
Moskát, C.
Multivariate plexus concept in the study of complex ecological data: an application to the analysis of bird-habitat relationships.
1991, 6: 79-89
KW: community structure, NMDS, plexus diagram
DI: MUL, NUM, ORD, ZOO, RES
GG: EUC, HU

101
Mazzoleni, S., French, D.D. & Miles, J.
A comparative study of classification and ordination methods on successional data.
1991, 6: 91-101
KW: PCA, TWINSPAN
DI: SYS, ORD, NUM, VEG, DYN
EC: HEA
GG: EUW, GB

102
Orlóci, L.
On character-based plant community analysis: choice, arrangement, comparison.
1991, 6: 103-107
KW: New Mexico
DI: NUM, VEG, THE, INF
EC: DES
GG: AMN, US

103
Conley, W.
An Institute for Theoretical Ecology? Part III: Why we need it and what it should be like.
1991, 6: 109-112
DI: THE, ECO, EDU, SCI

104
Conley, W.
An Institute for Theoretical Ecology? Part IV: "Computational workshops": a planned activity for theoretical ecology.
1991, 6: 113-120
KW: mathematical ecology, research funding, interdisciplinary research
DI: THE, ECO, NUM, MAT, STA, SCI, EDU

105
Bradbury, R.H.
Understanding *Acanthaster*.
1991, 6: 121-126
KW: *Acanthaster planci*, crown-of-thorns starfish, outbreaks
DI: POP, DYN, COM
EC: COR
GG: AU

106
Zerihun Woldu
Implications of photosynthetic pathways of some grass species in Ethiopia to landuse.
1991, 6: 127-130
KW: Andropogoneae, zone
DI: PHY, GRB, GEO, PHO, LAN
EC: ARI
GG: AFE, ET

107
Palmer, A.R.
The potential vegetation of the upper Orange river, South Africa: concentration analysis and its application to rangeland assessment.
1991, 6: 131-138
KW: rainfall, altitude, *Grewio-Rhoetalia erosae*, *Pentzietea incanae*
DI: SYS, CLI, GRD, MAP, NUM
EC: ARI
GG: AFS, ZA

108
Mueller-Dombois, D.
Stand demography and vegetation change.
1991, 6: 139-141
KW: Hawaii, senescence, Shimagare, Galápagos, *Metrosideros*
DI: POP, DYN, DEM, THE, VEG, ISL
EC: TRO, VOL, BOR
GG: PAC, US, ASE, JP, ALE, EC

109
Kenkel, N.C.
A weighted tesselation model for studying plant population dynamics.
1991, 6: 143-149
KW: Delaunay, Dirichlet, Fraser
DI: THE, ECO, PAT, NUM, POP, DYN

110
Hauser, M. & Mucina, L.
Spatial interpolation methods for interpretation of ordination diagrams.
1991, 6: 151-168
KW: kriging, residual, TSA
DI: THE, VEG, MET, NUM, PAT, ORD
EC: FOR, BOR, GRA, DUN
GG: EUA, AT, EUW, NL

111
Spitaleri, R.M., Napoleone, I. & Contoli, L.
A numerical approach for the evaluation of biotopes for conservational purposes.
1991, 6: 169-171
KW: policy, ranking, NMDS
DI: NUM, ORD, CON, DIV, THE, MET

112
Conley, W. & Brunt, J.W.
An Institute for Theoretical Ecology? Part V: Practical data management for cross-site analysis and synthesis of ecological information.
1991, 6: 173-180
KW: data management, interdisciplinary research
DI: THE, ECO, EDU, STA, NUM, MAT

113
Conley, W., Conley, M.R. & Karl, T.R.
A computational study of episodic events and historical context in long-term ecological processes: climate and grazing in the northern Chihuahuan Desert.
1992, 7: 1-19
KW: climate trends, desert climate, desertification, domestic livestock, jackknifing, Monte Carlo, perennial desert grasslands, precipitation, shrub increase, temperature, time series analysis, NMDS
DI: CLI, GRB, NUM, VEG, DYN, ORD, GRD
EC: DES, ARI
GG: AMN, US

114
Fekete, G.
The holistic view of succession reconsidered.
1992, 7: 21-29
KW: deterministic, extrazonal, holism, primary succession, reductionism, series, stochastic succession, zonal, *Festuco-Brometea*, *Festuca vaginata* grassland, *Quercetalia pubescentis*, *Querco-Fagetea*, *Rhamno-Prunetea*
DI: THE, VEG, DYN
EC: DUN, GRA, FOR
GG: EUC, HU

115
Lagonegro, M., Hull, V., Falcucci, M. & Cignini, I.
Simulating aquatic systems: a model of ecological processes.
1992, 7: 31-54
KW: simulation, nitrogen, zooplanton
DI: MOD, PLN, NUT, MAT, THE
EC: AQU

116
García, A., Carlos, G. & Bermudez, F.F.
Vegetation, soil and management relations in meadow communities of the Valdeon Valley, Cordillera Cantábrica, Spain.
1992, 7: 55-60
KW: deficiency, floristic, haying, soil chemicals
DI: PED, CLI, ENV, NUM, DIV, ORD
EC: GRA
GG: EUW, ES

117
Guillet, A. & Moll, E.J.
Structural and biogeographical patterns of vegetation in equatorial Sudan. I. Terrestrial communities.
1992, 7: 61-73
KW: mosaic, national park, TWINSPAN
DI: GEO, SYS, NUM, NCL, PED, CON
EC: ARI, SAV
GG: AFN, SD

118
Guillet, A. & Moll, E.J.
Structural and biogeographical patterns of vegetation in equatorial Sudan. II. Physiognomic trends.
1992, 7: 75-80
KW: TWINSPAN
DI: SYS, GEO, STR, NUM, ORD
EC: ARI, SAV
GG: AFN, SD

119
Feoli, E. & Zuccarello, V.

Fuzzy sets and structural changes in forest succession: an example from broad leaved forests of N.E. Italy.
1992, 7: 81-90
KW: *Fagus*, kriging, *Ostrya*, *Quercus*, trajectories
DI: NUM, ORD, INF, VEG, DYN, IND, STR
EC: FOR
GG: EUS, IT

120
Wildi, O.
On the use of Mantel's statistic and flexible shortest path adjustment in the analysis of ecological gradients.
1992, 7: 91-101
KW: non-linearity, site factors, spatial analysis, pH
DI: GRD, THE, VEG, MET, PAT, ORD, NUM, HYD, PED

121
Niven, B.S.
Formalization of some basic concepts of plant ecology.
1992, 7: 103-113
KW: resource, associate, modifier, malentity
DI: THE, ECO, TER, PPR, COM

122
Chengyong Sun, Feoli, E. & Lagonegro, M.
Measuring climatic niche width and overlap of vegetation types of China.
1992, 7: 115-119
KW: dynamic spaces, hypervolume, niche space, Procrustes analysis, static spaces, trajectory, minimum spanning tree
DI: CLI, COM, NUM, VEG,GEO
GG: ASE, CN

123
Yu, S.X. & Orlóci, L.
Niche breadth: an index of species environmental fitness.
1992, 7: 121-125
KW: *Cryptocarya*, congruence, performance, tolerance range
DI: NUM, AUT, POP, RES, INF
EC: TRO
GG: ASE, CN

124
Bailey, R.C.
Hierarchical analysis of community and habitat structure.
1992, 7: 127-135
KW: freshwater mussels, nested ANOVA, ANCOVA, PCA
DI: PAT, NUM, THE, ZOO, STA, ORD
EC: LAC
GG: AMN, CA

125
Jianguo Wu
Detecting spatial patterns: the net-function interpolation.
1992, 7: 137-143
KW: Inner Mongolia, net function interpolation method, populational distribution
DI: PAT, POP, THE, MET, NUM
EC: GRA
GG: ASE, CN

126
Pucheta, E., Díaz, S. & Cábido, M.
The effect of grazing on the structure of a high plateau grassland in central Argentina.
1992, 7: 145-152
KW: morphological group, pampa, DCA, TWINSPAN
DI: GRB, DIT, MOR, NUM, ORD, NCL
EC: GRA
GG: ALT, AR

127
Hill, M.O.
Modelling vegetation succession in abandoned arable fields in Britain.
1992, 7: 153-159
KW: initial floristic composition, old field, projection matrix, set-aside, successional model
DI: VEG, DYN, MOD, VEG
EC: SEG
GG: EUW, GB

128
Feoli, E. & Lagonegro, M.
Testing for elliptical clusters in ecological multidimensional spaces.
1992, 7: 161-167
KW: niche
DI: THE, VEG, NUM, MET, MUL, ORD, NCL

129
Scheuring, I.
A population dynamical description of the self-thinning law.
1992, 7: 169-174
KW: canopy closure dynamics, differential equation system, even-aged plants, parameter estimation
DI: POP, DYN, THE, COM, NUM, MOD, DEM

130
Xiaoshuang He
Structural characteristics of forest vegetation in the northeastern Lesser Xingan Mountains, China.
1992, 7: 175-180
KW: equitability, dominance, importance value, zonation
DI: STR, DIV, VEG, DYN, NUM, ORD
EC: FOR, BOR
GG: ASE, CN

131
Menghi, M., Cábido, M., Acosta, A., Peco, B. & Pineda, F.D.
Changes in pasture communities subject to burning in the Córdoba Mountains, Argentina.
1993, 8: 1-10
KW: Central Argentina, mountain areas, pasture, spatial niche, succession, correspondence analysis
DI: VEG, DYN, COM, GMO, MUL, NUM, ORD, FIR, DIT
EC: GRA
GG: ALT, AR

132
Crispi, G. & Mosetti, R.
Adjoint estimation of aquatic ecosystem parameters.
1993, 8: 11-14
KW: spatial niche, succession, correspondence analysis, calibration, differential equations
DI: GMO, GRB, MUL, VEG, DYN, NUM, COM, ORD
EC: GRA
GG: ALT, AR

133
McClellan, Y. & Boecklen, W.J.
Plant mediation of ant-herbivore associations: the role of sticky rings formed by *Boerhavia spicata*.
1993, 8: 15-20
KW: Chihuahuan Desert, ant-aphid-plant associations, herbivory, plant physical defenses
DI: ANT, INT, ZOO, GRB
EC: DES, ARI
GG: AMN, US

134
Dale, M.R.T., Henry, G.H.R. & Young, C.
Markov models of spatial dependence in vegetation.
1993, 8: 21-24
KW: Ellesmere Island, goodness-of-fit, meadows, transect
DI: VEG, MOD, PAT
EC: ARC
GG: AMN, CA

135
Novotný, V.
What can be inferred from species diversity indices?
1993, 8: 25-26
KW: community indices
DI: DIV, THE, COM

136
Vetaas, O.R.
Effect of spatial arrangement of environmental variables on ordination results from a disturbed humidity gradient in northeastern Sudan.
1993, 8: 27-37
KW: arch-effect, detrending, constrained ordination, partial ordination, non-linearity, spatial independence, DCA
DI: ORD, GRD, NUM, DIT
EC: ARI
GG: AFN, SD

137
Rousseau, R. & Van Hecke, P.
Introduction of a species does not necessarily increase diversity.
1993, 8: 39-40
KW: dominance, Lorenz curve
DI: DIV, THE, COM

138
Fabricius, K.E. & Dale, M.B.
Multispecies associations of symbionts on shalow water crinoids of the central Great Barrier Reef.
1993, 8: 41-52
KW: Friedman-Rafsky test, host species, minimum spanning tree, symbiosis
DI: INT, ZOO, ORD, NUM, NCL
EC: COR
GG: AUN

139
De Patta Pillar, V. & Orlóci, L.
Taxonomy and perception in vegetation analysis.
1993, 8: 53-66
KW: Chaco, character set, community structure, congruence, convergence, crisp taxa, divergence, environmental structure, fuzzy taxa, growth-form, life-form, randomization test, redundancy
DI: THE, VEG, MET, LIF, NUM, ORD, INF
EC; BOR, ARI
GG: AMN, CA, ALE, BR

140
Pizzolotto, R.
Carabid beetle (*Coleoptera, Carabidae*) coenoses for evaluation of faunal resources and impact assessment in the Aspromonte National Park of Calabria (Italy).
1993, 8: 69-79
KW: zoocoenoses, PCA
DI: ZOO, COM, NUM, NCL, ORD
GG: EUS, IT

141
Sun Ping
On identifying representative variables in ecosystem studies.
1993, 8: 81-84
KW: PCA
DI: NUM, ORD, THE, ECO
GG: ASE, CN

142
Zupo, V.
The use of feeding indices for the study of food webs: an application to a *Posidonia oceanica* ecosystem.
1993, 8: 85-95
KW: Ischia, trophic group, food preference
DI: WEB, MUL, NCL, NUM, ORD, MAR
EC: SEA
GG: EUS, IT

143
Camiz, S.
Computer assisted procedures for structuring community data.
1993, 8: 97-104
KW: AOC, canonical contingency table, cluster analysis, correspondence analysis, eigenanalysis, exploratory analysis, table structuring
DI: THE, MET, NUM, NCL, MUL, ORD

144
Chang Hsin-Shih & Yang Dian-an
A study on climate-vegetation interaction in China: the ecological model for global change.
1993, 8: 105-119
KW: DCA, information systems, topography
DI: CLI, NUM, GEO, ORD, VEG
GG: ASE, CN

145
De Leo, G.A. & Ferrari, I.
Disturbance and diversity in a river zooplankton community: a neutral model analysis.
1993, 8: 121-129
KW: rotifers
DI: ZOO, PLN, DIT, DIV, MOD
EC: FLU
GG: EUS, IT

146

Levins, R. & Adler, G.H.
Differential diagnostics of island rodent populations.
1993, 8: 131-139
KW: rodens, signed diagraphs, time averaging
DI: ISL, POP, THE, DYN, ZOO

147
Orlóci, L.
Conjectures and scenarios in recovery study.
1993, 8: 141-148
KW: chaos, edges, phases, scale, steady state, Jornada, Arizona, Sonora Desert
DI: THE, VEG, PAT, DYN, NUM, ORD, GRD
EC: DES, ARI
GG: AMN, US

148
Kiflemariam, M.
Dialectics of biological dimensionality and biological diversity.
1993, 8: 149-158
KW: biodiversity, disparative systems
DI: THE, ECO, DIV, ENV, PHI, ENE
GG: AFE, ET, ER

149
Yu, S.X. & Orlóci, L.
Index of species environmental fitness: the niche breadth.
1993, 8: 159-164
KW: Dinghushan, minimum discrimination information statistics
DI: THE, ECO, AUT, MET, NUM, INF, COM
EC: TRO
GG: ASE, CN

150
Dale, M.B. & Dale, P.T.
Classification with multiple dissimilarity matrices.
1994, 9: 1-13
KW: constrained classification, multiple-objective optimisation, pareto optimality, NMDS, correspondence analysis, scale, sampling, fuzzy
DI: NUM, MUL, MET, RES, NCL, ORD, THE, VEG

151
Escudero, A., Pajarón, S. & Gavilán, R.
Saxicolous communities in the Sierra del Moncayo (Spain): a classificatory study.
1994, 9: 15-24
KW: comparison of dendrograms, consensus tree, phytosociology, *Asplenietea trichomanis*, PCA
DI: SYS, NUM, NCL, ORD
EC: CHA
GG: EUW, ES

152
Feoli, E. & Zuccarello, V.
Naiveté of fuzzy system spaces in vegetation dynamics?
1994, 9: 25-32
DI: NUM, MET, NCL, ORD, VEG, DYN, THE
EC: FOR
GG: EUS, IT

153
Tóthmérész, B.
Statistical analysis of spatial pattern in plant communities.
1994, 9: 33-41
KW: beech forest, characteristic plot size, complete spatial randomness, null model, shrub community, species-area relationship, species richness, *Querco-Fagetea*, *Fagion*, *Melico-Fagetum*, comparative area, discriminatory area
DI: NUM, PAT, DIV, THE, VEG, MET
EC: FOR
GG: EUC, HU

154
Dale, M.
Straightening the horseshoe: a Riemannian resolution?
1994, 9: 43-53
DI: NUM, THE, VEG, ORD, RES

155
Izsák, J. & Papp, L.
Numerical properties of jackknifed diversity indices tested on loose sets of coenological samples (*Diptera*, *Drosophilidae*).
1994, 9: 59-67
KW: Hill, Shannon-Wiener, confidence intervals, drosophilid assemblages, index sensitivity, significance tests
DI: DIV, NUM, THE, ZOO, COM, STA
GG: EUC, HU

156
Orlóci, L.
Global warming: the process and its anticipated phytoclimatic effects in temperate and cold zone.
1994, 9: 69-74
DI: CLI, DIT, PHY, GEO
EC: ALP, ARC
GG: AMN, CA, US, PAC

157
Palmer, A.R. & Orlóci, L.
A contingency table model of vegetation: the mapping problem.
1994, 9: 75-79
KW: canonical analysis, distribution, elevation, karoo, rainfall, topo-moisture
DI: NUM, CLI, MUL, MET, GRD, POP
EC: ARI
GG: AFS, ZA

158
Xiaoshuang He & Shaoquan Nie
Canonical contingency table analysis of the vegetation along elevation gradients of the Greater Xingan Mountains, China.
1994, 9: 93-100
DI: NUM, VEG, ORD, GRD, GEO
EC: BOR
GG: ASE, CN

159
LoBue, G., Montacchini, F. & Ceruti, A.
Macromycetes of the alpine belt: mycocoenological investigations in the Western Italian Alps by multivariate methods.
1994, 9: 103-153
KW: alpine fungi, mycocoenology, phytosociology, *Thlaspietea rotundifolii*, *Caricetea curvulae*, *Salicetea herbaceae*
DI: MYC, IND, SYS, NUM, NCL, ORD
EC: ALP, GRA, NIV, CHA

GG: EUS, IT

160
Uddin, M., Atiqullah, M. & Shaukat, S.S.
Sweep-out component analysis as an ordination model: an alternative to principal component analysis.
1994, 9: 155-158
KW: varimax rotation, PCA
DI: THE, MET, NUM, MUL, ORD

161
Menghi, M. & Herrera, M.
Major vegetational trends related to relief and hydrology in the Mar Chiquita wetlands.
1995, 10: 1-10
KW: inland wetland, hydro-topographical gradient, physiognomic change, DCA
DI: VEG, NUM, ORD, DYN, GRD, HYD, LIF, STR
EC: WET
GG: ALT, AR

162
Torres, P.S., Barberis, I.M. & Lewis, J.P.
Robustness of numerical methods for vegetation classification.
1995, 10: 11-16
KW: clustering, similarity
DI: THE, VEG, MET, NUM, NCL, RES

163
Moraczewski, I.R., Borkowski, W. & Kierzek, A.
Clustering geobotanical data with the use of a genetic algorithm.
1995, 10: 17-28
KW: cluster analysis, genetic algorithm, partitioning
DI: THE, VEG, NUM, NCL, MET, SYS

164
Fekete, G., Tuba, Z. & Précsényi, I.
Application of three approaches to evaluate abundance and rarity in a sand grassland community.
1995, 10: 29-38
KW: C4 plants, dominance, *Festuca vaginata* grassland, generalists, mesophyll succulence, net photosynthesis, niche width, niche overlap, specialists, water use efficiency, *Festuco-Brometea*
DI: COM, DIV, PHY, LIF, WAT, MOR, PHO, NUM, NCL
EC: DUN, GRA
GG: EUC, HU

165
Pausas, J.G. & Feoli, E.
Environment-vegetation relationships in the understory of Pyrennean *Pinus sylvestris* forests: I. An ordination approach.
1995, 10: 39-44
KW: CCA, correspondence analysis, normalization, understory, *Pino-Juniperetea*, PCA
DI: NUM, ORD, PED
EC: FOR
GG: EUW, ES

166
Geißelbrecht, J., Mucina, L. & Hiebinger, C.K.
A Monte Carlo randomisation procedure for estimating the synchronity of growth-curves in plant-demography studies.
1995, 10: 45-49
KW: *Anthyllis vulneraria*, *Globularia punctata*, leaf natality and mortality, population dynamics, synchronity of processes
DI: THE, POP, DYN, DEM, MET, NUM, MAT
EC: GRA
GG: EUA, AT

167
Orlóci, L.
Preface: special statistical ecology issue.
1995, 10: 53
KW: Manchester, Yale, editorial
DI: THE, ECO, STA, NUM, HIS
GG: AMN, US

168
Anonymous
Profile: Guest Editor, Professor G.P. Patil.
1995, 10: 55-56
KW: Pennsylvania, editorial
DI: WHO, HIS, ECO, STA, NUM
GG: AMN, US

169
Patil, G.P.
Silver jubilee of statistical ecology around the world.
1995, 10: 57-64
KW: Manchester
DI: THE, ECO, HIS, STA, NUM

170
Patil, G.P.
Penn State statistical ecology and environmental statistics - 25 years.
1995, 10: 65-74
KW: Center for Statistical Ecology and Environmental Statistics, ecological statistics, environmental risk assessment, graduate quantitative ecology program, observational economy, spatial statistics, Pennsylvania
DI: THE, ECO, STA, NUM, PAT, MET, EDU
GG: AMN, US

171
Ghosh-Dastidar, M., Johnson, G., Norris, R., Orsin, J. & Shirk, S.
On cross-disciplinarity of a statistical ecology and environmental statistics classroom at Penn State.
1995, 10: 75-79
KW: environmental science, multidisciplinarity, Pennsylvania
DI: THE, ECO, STA, NUM, MET, EDU
GG: AMN, US

172
Johnson, G.D. & Patil, G.P.
Estimating statewide species richness of breeding birds in Pennsylvania.
1995, 10: 81-87
KW: covariate-directed sampling, species richness estimation, species area curve
DI: STA, NUM, ZOO, MET, DIV
GG: AMN, US

173
Myers, W.L., Johnson, G.D. & Patil, G.P.
Rapid mobilization of spatial/temporal information in the context of natural catastrophes.

1995, 10: 89-94
KW: environmental resources, GIS, ranked set sampling, rapid assessment
DI: MET, THE, STA, GEO, REM, DIT

174
Norris, R.C., Patil, G.P. & Sinha, A.K.
Estimation of multiple characteristics by ranked set sampling methods.
1995, 10: 95-111
KW: concomitant variable, environmental sampling, simple random sampling, stratified sampling, unequal allocation
DI: THE, ECO, STA, NUM, MET

175
Kaur, A., Gregori, D., Patil, G.P. & Taillie, C.
Assessment of aquatic systems toxicity using generalized linear models and quasi-likelihood techniques.
1995, 10: 113-121
KW: generalized estimating equations, toxicity assessment
DI: ECO, ENV, TOX, STA, POL, WAT, MOD, THE

176
Johnson, G.D., Tempelman, A. & Patil, G.P.
Fractal based methods in ecology: a review for analysis at multiple spatial scales.
1995, 10: 123-131
KW: multiscale analysis
DI: THE, ECO, PAT, NUM, IND, LAN

177
Urfer, W. & Schwarzenbach, F.H.
Analysis of arctic mountain vegetation: diversity and vertical distribution.
1995, 10: 133-140
KW: species presence index, vegetation line, vertical distribution
DI: MET, VEG, DIV, GEO
EC: ARC
GG: ATN, GL

178
Patil, G.P.
Environmental and Ecological Statistics: an innovative cross-disciplinary journal for statistics, ecology, and the environment.
1995, 10: 141-148
DI: STA, NUM, MOD, MET, SCI, ECO, ENV

Authors Index

Index of Scientific Disciplines and Methods

Geography Index

Index of Ecosystems

Keyword Index

Table 1. The codes for disciplines or groups of organisms. The coding was extended also on other items outside the scope of this bibliography, but still being of relevance for vegetation science and plant ecology.

ANT	Ants and ant-plants
AUT	Autecology
BIB	Bibliography
CLA	Cladistics, vicariance biogeography
CLI	Climate, microclimate, atmosphere relations, snow
COM	Competition, niche, organization of plant communities
CON	Nature conservation, nature reserves
COX	Ecological complexity
CRY	Cryptogames, syntaxonomy of cryptogamic communities
DEM	Demography
DIT	Disturbance
DIV	Diversity
DYN	Vegetation and population dynamics, succession
ECO	Systems and general ecology
EDU	Environmental education
ENE	Energy, biomass, production
ENV	Environmental management
EVO	Evolution, evolutionary ecology
FIR	Fire ecology
GEN	Genetics, ecological genetics, population genetics
GEO	Plant geography, vegetation geography
GMO	Geomorphology
GRB	Grazing, browsing
GRD	Gradient analysis
HIS	History of science
HUM	Human ecology
HYD	Hydrobiology (general)
IND	Indication, bioindicators
INF	Information theory and methods
INT	Plant-animal interactions
ISL	Island biogeography
LAN	Landscape ecology, environmental planning
LIF	Life history, strategies, syndromes, adaptation
MAP	Vegetation mapping, cartography
MAR	Marine biology
MAT	General mathematics
MET	Methods of vegetation analysis
MIC	Ecology of microorganisms, bacteria
MOD	Ecological modeling
MOR	Ecological morphology, morphology of plants
MUL	Multivariate techniques
MYC	Mycology, mycorrhiza
NCL	Numerical classification
NUM	Numerical techniques in vegetation analysis
NUT	Nutrients
ORD	Ordination
PAT	Pattern analysis
PED	Plant-soil relations, pedology, soil analyses
PHI	Philosophical aspects of natural sciences
PHO	Photosynthesis, gas exchange
PHY	Ecophysiology, physiology of plants
PLN	Plankton
POL	Pollution problems
POP	Population ecology
PPR	Predator-prey relations
REM	Remote sensing studies
RES	Resemblance
SCI	Scientometrics, journalology, publishing
STA	Statistical methods
STB	Ecological stability
STR	Vegetation structure
SYS	Vegetation systematics, syntaxonomy
TAX	Taxonomy, cytotaxonomy, karyology
TER	Scientific terminology
THE	Vegetation theory, ecological theory
VEG	General vegetation science
WAT	Water-plant relations, water in plants
WEB	Food webs
WHO	Personalities: obituaries, anniversaries, jobs, research
ZOO	Zoology

Table 2. Codes for geographic units (countries, continents, subcontinents and other parts of the world). Only those geographic units are presented, which occur in this bibliography.

Countries

AR	Argentina
AT	Austria
AU	Australia
BE	Belgium
BG	Bulgaria
BR	Brazil
CA	Canada
CH	Switzerland
CN	China
CS	former Czechoslovakia
CY	Cyprus
CZ	Czech Republic
EC	Ecuador
ER	Eritrea
ES	Spain
ET	Ethiopia
GB	Great Britain
GL	Greenland
GR	Greece
HU	Hungary
IT	Italy
JP	Japan
NL	Netherlands
PK	Pakistan
SD	Sudan
SK	Slovakia
TZ	Tanzania
US	USA
ZA	South Africa

Continents, subcontinents (and analogous parts of the continents) & oceans

AFE	East Africa
AFN	North Africa
AFS	Southern Africa
ALE	Equatorial S. America
ALT	Temperate S. America
AMN	North America
ASE	East Asia
ASI	Indian Subcontinent
ATN	Northern Atlantic Ocean
AUN	Northern Australia
EUA	Alpine countries
EUB	Balkans
EUC	Central Europe
EUS	Southern Europe
EUW	Western Europe
PAC	Pacific Ocean

Table 3. The codes for ecosystems extended beyond the scope of this bibliography.

ALP	Alpine
AQU	Aquatic (freshwater) environments, mineral springs
ARC	Tundra and polar deserts
ARI	Arid ecosystems
BOR	Boreal forests
CHA	Rock fissures, walls, screes
COR	Coral reefs
DES	Deserts
DUN	Dunes
EPI	Epiphytic vegetation
FLO	Flooded environments
FLU	Fluviatile ecosystems
FOR	Temperate forests
GRA	Temperate grasslands, steppe, pampa
HEA	Heathland
LAC	Lacustrine ecosystems
MES	Mediterranean ecosystems, chapparall, mallee, fynbos
MIR	Mires, bogs, fens, carrs
NIV	Nival ecosystems
RUD	Ruderal vegetation
SAL	Salt-ladden environments
SAV	Tropical grasslands, savannah
SEA	Open-sea ecosystems
SEG	Segetal (agrestal) vegetation
TRO	Tropical ecosystems
URB	Urban ecosystems
VOL	Volcanic ecosystems
WET	Wetlands (incl. wet meadows, reed, swamps)