## VOLUME IV

## INDEX OF SUBJECTS AND AUTHORS

Only main topics are listed, and reference is given to the first page of each paper in which they are discussed.

Age-effect on non-disjunction, in Drosophila, 284

Allelism of 'Opposum' and 'Ragged' in mouse, 1

Allometry of body weight and shank length, in fowl, 167

Anaphylactoid reaction in rat, 346

Apirion, D., 276

Ashton, G. C., 240

Aspergillus nidulans
genetics of ascospore colour in, 276
micro-colonial growth of, 320
polarized negative interference in, 12
replica plating of micro-colonies of, 320

Beale, G. H., 42
Berry, R. J., 193
Binomial, heterogeneity in distribution, 455
Blight, resistance to, in cotton, 382
Blood transfusion, lack of heritable changes following, in poultry, 221
Body weight and growth, in fowl, 167
Bonner, D. M., 470
Bristle number, test of coadaptation, in Drosophila, 104
Broda, P. M. A., 483
Bulten, E. J., 305

Cellular damage after multiple mating, in Escherichia coli, 463

Chicken, see Poultry

Chromosome

breakage by X-rays, in *Drosophila*, 248, 446, 485

Colicin factor location, in Escherichia coli, 162

distribution in interspecific crosses, 266 inactive-X theory of dosage compensation,

mobilization by F-prime factor, in *Escherichia coli*, 328

origin of repeats, in *Drosophila*, 154 Cleft palate induced by teratogen, in mouse, 258

Clowes, R. C., 162 Coadaptation, lack of, in *Drosophila* crosses, 104

Cock, A. G., 167

Cohen, L. W., 143

Colicin factors, transfer of, in  $Escherichia\ coli,$  162

Combining abilities, non-additive model of, 65 Computation of heterogeneity in binomial distribution, 455

Conjugation in Escherichia coli, 30

Coprinus lagopus

mating type mutants in, 55

structure of mating type factors in, 323

Correlation between development time and growth, in *Drosophila*, 74

Cotton, bacterial blight resistance in, 382

Crawford, R. D., 370

Crow, J. F., 299

Culture medium for replica plating microcolonies of Aspergillus, 320

Cytoplasmic modification of responses to teratogen, in mouse, 258

Dawson, G. W. P., 416, 427

Day, P. R., 55, 323

de Haan, P. G., 30, 305

Development, relation between larval period and growth, in *Drosophila*, 74

Dosage compensation, inactive-X theory of, 93

Doolittle, D. P., 290

Drift of gene frequencies in mating systems,

Drosophila melanogaster

ecological genetics of growth in, 74

inheritance of lymph proteins in, 441 mutagenic effects of X-rays and formalde-

mutagenic effects of X-rays and formaldehyde on, 248

non-disjuction in, 284

origin of chromosomal repeats in, 154 radiosensitivity of spermatogonia in, 446 selection using assortative mating in, 356

X-ray induced translocations in, 485

Drosophila subobscura, lack of coadaptation in crosses of, 194

Duke, E. J., 441

Edwards, R. G., 389

Environment

effect of diet on development time, in Drosophila, 74

Environment—continued Goldstein, M., 258 effect of media on recombinant formation, Gowe, R. S., 370 in Escherichia coli, 457 Gross, J. D., 328, 457, 463 interactions with, in poultry, 370 Growth nutritional requirements of two Drosophila allometry of, in fowl, 167 spp., 104 ecological genetics of, in Drosophila, 74 Epigenetic polymorphisms in wild mouse populations, 193 Hair Episome density in mouse mutant, 1, 326 and Colicin factors, in Escherichia coli, 162 development and morphology of, in mouse curing by acridine orange, in Escherichia mutant. 1 coli, 305 Harris, J. M., 346 transfer, in Escherichia coli, 30, 480 Heritable changes, lack of, after blood Escherichia coli transfusions in poultry, 221 chromosome mobilization by F-prime fac-Heterogeneity tor in, 328 computation of, in binomial sampling, 455 effect of media on recombinant formation in radiosensitivity of spermatogonia, in Drosophila, 446 F-curing by acridine orange in, 305 Heterozygosity, minimum decrease of, in modification by phage P1 in, 480 mating systems, 399 multiple mating in, 463 Histocompatibility, effect of irradiation on, phage T3 restriction in, 483 in mouse, 21 transfer of Homozygosity, effect on fitness of, 318 colicin factors in, 162 Hull, P., 370 F-prime factors in, 30 Hybrids, chromosome distribution in interspecific, 266 Ferguson, K. A., 240 Fitness, effect of homozygosity on, 318 Inbred strain, subline divergence of, in rat, Formaldehyde-induced mutants, in Droso-346 phila, 248 Inbreeding Fowl, see Poultry during selection, in Drosophila, 356 F-particles, in Escherichia coli effects of, on two Drosophila spp., 104 chromosome mobilization by, 305 maximum avoidance of, 399 distribution of, 30, 305 Innes, N. L., 382 multiplication of, 305 Interaction numbers per cell of, 30, 305 genic, affecting blight resistance in cotton, transfer of, 30 382 Fraser, F. C., 258 genotype-environment, in poultry, 370 Interference, polarized negative, in Asper-Gene frequency gillus, 12 drift of, in mating systems, 399 Irradiation of transferrin alleles in sheep, 240 effect on histocompatibility mutants, in Genetic determinations of responses to teratogen, in mouse, 258 induced mutants during spermatogenesis, Genetic model of non-additive combining in Drosophila, 248 ability, 65 sensitivity to Genetic parameters of poultry control popuof meiotic stages, in mouse, 389 lation, 290 of spermatogonia, in Drosophila, 446, Genetic variance 485 effect of disruptive selection on, 318 interactions affecting, in poultry, 370 Jackson, H., 333 Geographical races of Drosophila, differences between, 104 Gibson, I., 42 Kalmus, H., 346

Kaplan, S., 470

Kelsall, P., 284

Kato, M., 221

Gilbert, N., 65

Godfrey, J., 21

Glover, S. W., 480, 483

Multisite mutants in Neurospora, 470 Kimura, M., 399 Mutants King, S. C., 290 blight resistance, recessive, in cotton, 382 Kosin, I. L., 221 colour, in Aspergillus, 276 CRM negative at td locus in Neurospora, Lethality after multiple mating, in Escherichia coli, 463 Lethals induced by irradiation, in mouse, 389 histocompatibility, search for, in mouse, 21 lymph-protein, in Drosophila, 441 Linkage of mating type, in Coprinus, 55 colour mutants in Aspergillus, 276 leu-ara B region in Salmonella, 427 'Oppossum', dominant hair shedding, in 'Striated' in mouse, 151 mouse, 1 prevention of anaphylactoid reaction, Lyon, M. F., 93 recessive, in rat, 346 McBride, G., 356 'Ragged', dominant hair shedding, in mouse, 1, 326 McCarthy, J. C., 485 'Striated', dominant sex-linked coat tex-McFarquhar, A. M., 104 Mackintosh, M. E., 320 ture, in mouse, 151 Mann, S. J., 1 Mutation Maternal effects in poultry, 290 chromosome breaks in Drosophila, 154 Mating, effect of multiple, in Escherichia coli, induced by alkane sulphonates, in rat, 333 Mating systems, maximum avoidance of informaldehyde, in Drosophila, 248 breeding in, 399 irradiation Mate-killer (mu) particles in Paramecium in Drosophila, 248 effect of ribonuclease and 8-azaguanine on, in mouse, 389 models for distribution of, 158 Nafei, H., 485 Mating type factors in Coprinus, 55, 323 Neurospora crassa, CRM negative mutants at Mating types in Paramecium bursaria, 132 td locus in, 470 Mating type substances in Paramecium, 143 Nicotiana spp., chromosome distribution in Meiosis crosses between, 266 chromosome distribution following, Non-disjunction in Drosophila, 284 interspecific hybrids, 266 non-disjuction during, in Drosophila, 284 Pantelouris, E. M., 441 radiosensitivity of stages of, in mouse, 389 Paramecium aurelia, metagons in Metagons in Paramecium chemical nature of, 42 chemical nature of, 42 models for distribution of, 158 models for distribution of, 158 Paramecium bursaria Model for mating types in, 132 non-additive combining ability, 65 mating type substances of, 143 transduction experiments, 416, 427 Partington, M., 333 Perithecium, determination of phenotype of, hair density in mutants, 1, 326 in Aspergillus, 276 inactive-X theory of dosage compensation Phage host induced modification by P1, 480 organ specificity of responses to teratogen T3 restriction in Escherichia coli, 483 in, 258 Phillips, R. J. S., 151 polymorphism in wild populations of, 193 Pinsky, M. F., 258 radiosensitivity of meiotic stages in, 389 Plasmids, Colicin factors in Escherichia coli, search for histocompatibility mutants in, 162 21 Polymorphism of 'Striated', dominant sex-linked coat texture skeleton in wild mouse populations, 193 mutant in, 151 transferrins in sheep, 240 Mu particles in Paramecium Population effect of ribonuclease and 8-azaguanine on, effective size of, in Drisophila, 356

genetic stability of control, in poultry, 290

polymorphism in wild mouse, 193

models for distribution of, 158

Poultry Shank length and growth, in fowl, 167 genetic stability of control populations in, Sheep, serum transferrins in, 240 Siddigi, O. H., 12 genotype-environment interactions in, 370 Siegel, R. W., 132, 143 growth and form in, 167 Significance test for concurrence of regression heredity and blood transfusion in, 221 lines, 167 Pritchard, R. H., 320 Skeletal variants in wild mouse populations, Probability distribution of chromosomes in 193 interspecific hybrids, 266 Skin-grafts, in test for histocompatability Proteins, lymph, inheritance of, in Drosophila, mutants, in mouse, 21 Slee, J., 326 Putrament, A., 12 Slen, S. B., 370 Slizynska, H., 154, 248, 446 Smith-Keary, P. F., 427 Rat anaphylactoid reaction in, 346 Spermatogenesis, sensitivity to induced mutation by alkane sulphonates alkane sulphonates, in rat, 333 in, 333 X-rays, in *Drosophila*, 248, 446, 485 Reciprocal differences in responses to tera-Stacev, K. A., 480, 483 togen, in mouse, 258 Stouthamer, A. H., 30, 305 Recombination Suyama, Y., 470 effect of media on, in Escherichia coli, 457 Symonds, N., 480, 483 frequencies in transduction experiments, 416 Technique for replica plating micro-colonies of multisite mutants, in Neurospora, 470 of Aspergillus, 320 Teratogen, organ specificity of responses to, in Reeve, E. C. R., 158 Regression lines, significance test for conmouse, 258 currence of, 167 Thoday, J. M., 318 Reversion of multisite mutants, in Neuros-Transduction pora, 470 analysis, in Salmonella, 427 Robertson, A., 356 interpretation of experiments in Robertson, F. W., 74, 104 Salmonella, 416 Ross, G. J. S., 158 Translocations induced by X-rays, in Drosophila, 485 Salmonella typhimurium, transduction in, 416, in test of inactive-X theory, in mouse, 93 427 Transferrins in sheep, 240 Saunders, J. H., 382 Scaife, J., 328 van Vleck, L. D., 290 Schell, J., 480, 483 Vertebral fusion induced by teratogen, in Searle, A. G., 21, 389 mouse, 258 Selection Viability of 'Striated' mutant in mouse, 151 disruptive, effects of, 318 West, G. B., 346 for development time and growth, in Drosophila, 74 Woolf, B., 455 using assortative mating, in Drosophila, 356 Serum transferrins in sheep, 240 Xanthomonas malvacearum, resistance to, in

cotton, 382

Sficas, A. G., 266