
Index

- C. elegans*, 32, 42, 71, 72, 134
Drosophila, 25, 41–43, 50, 72, 121, 125, 132, 134, 137
Hydra oligactis, 117
Allium tricocum, 44
Ascophyllum nodosum, 44
Cecropia obtusifolia, 44
Garcinia lucida, 44
Goniastrea aspera, 44
Goniastrea favulus, 44
Lacerta vivipara, 45
Limonium delicatulum, 44
Littorina rudis, 44
Muricea californica, 44
Muricea fruticosa, 44
Plantago lanceolata, 50
Platygyra sinensis, 44
Populus tremuloides, 44
Sceloporus graciosus, 45
Sceloporus undulatus, 45
Umbonium costatum, 44
Yoldia notabilis, 44
- Abrams, XIV, 14, 32, 38, 43, 128
adaptive, 2, 4, 26, 135–137
aging, 14, 35, 39, 42, 123, 125, 126, 131–139
Alberts, 134
allocation, 14, 15, 51, 58, 67, 75, 77, 78, 83
Anderson, 76
antagonistic pleiotrophy, 4, 5, 43, 135
Austad, 44
autonomous, 53, 54, 62, 83, 88
- Babcock, 44
Barbi, X
Barnes, 44
Barton, 5, 135
Bellman, 13, 57–59, 64, 67, 98, 144, 145
Bertalanffy, 55
Bonsall, 14
Bossert, 51, 54, 80
Box, 80
Bronikowski, 128
Bulmer, 57
- Carey, XIV, 8, 125, 133, 134
Caswell, XIV, 10, 44, 49, 129
Charlesworth, IX, XIV, 9, 24, 30, 32, 51, 52, 54, 56, 67, 80, 120, 128, 135
Charnov, 51
Christensen, XIV
Chu, 15, 41, 51, 129
Cichon, 14, 53, 57
Clark, 57
Clark, James S., 134
Cole, 51
comparative, 134

- control, 59–63, 83–85, 87–89, 91, 93, 94
 Coulson, 134
 Cox, 25
 Cunningham, 134
 Curtsinger, XIV, 125
- Dölling, 45
 damage, 5, 13, 14, 49, 51–54, 57, 72, 75, 77, 118, 119
 Darwin, 3
 degree of senescence, 108, 112, 122
 Diekmann, 128
 disposable soma, 5, 14, 135
 Doblhammer, X
 Doncaster, XIV, 14, 127
 Drake, 32
 Drenos, 14
 dynamic programming, 14, 57, 67, 98, 144
- Enhancement, 67, 68, 71, 95, 96, 98–100, 103–106, 113, 115, 119
 Ensenescence, 103–106, 112, 122
 epistasis, 25, 38, 41, 42
 Evans, 28, 30, 32
- Feichtinger, XIII
 Finch, 44
 Fisher, 5
 force of selection, 1, 2, 4, 5, 19–21, 23–25, 33, 36–39, 41, 89, 132, 136, 137
 Fragen, 52
 Fuernkranz-Prskawetz, XIII
- G-matrix, 37, 90
 Gadgil, 51, 54, 80
 Gampe, X, XIII
 Gardner, 14
 Gems, XIV
 Golden, 42
 Goldstein, X
 Gompertz, 56, 132
 Gompertz-Makeham, 56
 Good, 25
- Grigg, 44
 growth, 2, 6, 13, 14, 36, 45, 50–56, 58, 59, 62–64, 66–73, 75–79, 81–83, 86–88, 90, 91, 94, 95, 97, 103, 104, 107, 108, 110, 113, 116–122, 125–129, 134, 138, 139
 Gruenfelder, 133
- Haldane, 9
 Hamilton, VII, VIII, 1–4, 15, 19–27, 30, 33, 35–38, 40–44, 49, 59, 72, 89, 90, 132, 135
 Hamiltonian, 59, 60, 62, 63, 67, 84–86, 88–91, 93–95
 Hirsch, 132
 Hughes, 43, 135
- indeterminate growth, 2, 49, 72, 118, 127
- Jeune, X
 Johnson, 125, 132
- Kamien, 62
 Kaplan, 15, 41, 51, 129
 Keightley, 32
 Kemperman, 44
 Kimura, 28, 32
 Kirkwood, 5, 14
 Klass, 132
 Kohler, 45
 Kozlowski, 14, 51, 53, 56, 57
 Kussel, 130
- Léonard, 62
 Lande, 36, 90
 Landis, 42
 Lee, XIV, 15, 41, 51, 129
 Leibler, 130
 Leon, 51, 52, 54
 lifespan, 8, 12, 14, 15, 19, 25, 40, 42, 43, 52, 54, 72, 131, 132
 longevity, 127, 129, 131, 132
 Lotka, 9, 127
 Lotka Equation, 9, 20
 Ludwig, 14

- maintenance, 2, 51, 52, 54, 55, 57,
 58, 62–64, 66–70, 75, 77–79, 81,
 83, 88, 91, 94, 95, 97–99, 101,
 104, 106, 108, 112–122, 124,
 126, 138, 139
 Mair, 25, 40, 125, 132
 Mangasarian, 85, 90
 Mangel, 14, 51, 53, 57
 Martinez, XIV, 73
 Maruyama, 28, 32
 Maximum Principle, 57, 59, 60, 63,
 64, 85, 86, 141, 142
 McCaroll, 42
 measure of senescence, 5, 7, 13
 Medawar, 4, 20, 26, 35, 135
 Melov, 42
 Michalski, XIV, 63
 mortality plateaus, 94, 101, 121
 Munch, 14
 Murphy, IX, XIV
 mutation accumulation, 4, 5, 16, 19,
 27, 28, 32, 33, 35, 38–43, 45,
 46, 49, 120, 135, 137
 mutation–selection balance, 26–28,
 32, 38
 Mylius, 128

 negative senescence, 2, 8, 16, 94
 Nesse, 133
 Neutral theory, 40, 137
 non-adaptive, 26, 135–137
 non-senescence, 2, 8, 14–16, 44–46,
 50, 53, 57, 71–73, 75, 83, 91,
 94, 98, 103, 104, 108, 110, 112,
 115–117, 119–122, 125, 126, 130
 Norton, 9

 optimization, 2, 14–16, 26, 32, 33,
 35, 36, 40, 41, 43, 49, 53, 54,
 57, 58, 64, 67, 68, 75, 90, 92,
 94, 120, 123, 124, 131, 135, 144,
 145
 Orzack, XIV, 129, 134
 Ottinger, 44

 Partridge, IX, XIII, 5, 32, 40, 41,
 125, 135
 Perrin, 51, 53, 56
 phylogenetic, 137
 Pletcher, 41, 42
 Pontryagin, 57, 59, 63, 64, 67
 Promislow, XIV, 25, 26, 42, 128, 136

 Rau, XIII
 Rebke, 67
 Reliability theory, 136
 repair, 5, 14, 51–53, 69, 71, 72, 75,
 82, 118
 Resznick, 128
 Ricklefs, 126
 Ripley, 129
 Roach, XIV, 50
 Robson, IX, XIV, 15, 41, 51, 129

 Sauer, 50
 Schaffer, 13, 51, 80
 Scheuerlein, 126, 134
 Schwartz, 62
 Senescence, 95, 96, 102, 103
 senescence, 1–5, 7, 8, 13–16, 19, 20,
 26, 35, 38, 40, 42, 44–46, 49, 59,
 66, 68, 69, 71–73, 88–90, 96–99,
 103, 107, 108, 112, 115–119,
 121–123, 125, 126, 128, 130–139
 Seymour, 14, 15, 127
 Sgrò, 41
 Slade, 50
 Smith, 136
 Sozou, 15
 Spencer, 25, 42
 Stamps, 51
 Steinsaltz, XIV, 28, 30, 32, 135
 Subsenescence, 104, 106, 112, 113,
 115, 119, 120, 122
 Sustenance, 95
 sustenance, 2, 66, 67, 71, 97, 99, 119,
 123, 125, 126, 131, 134–136,
 138, 139

 Taddei, XIV

Tatar, XIV, 25, 26, 125, 136

Taylor, 10, 11, 13, 51

Teriokhin, 51

trade-off, 4, 5, 12, 13, 32, 33, 35, 36,
46, 51, 75, 90, 120, 122, 123,
135, 136

Travis, 14

Tuljapurkar, XIV, 129, 134

Van Long, 62

Vaupel, X, XIII, 53, 67, 94, 132, 133

Veliou, XIV

Wachter, IX, XIV, 28, 30, 32, 84, 86,
91

West, 76

Williams, 2, 4, 13, 19, 35, 120, 126,
128, 135, 137

Wood, 132

Yampolsky, 41, 42

Yashin, 134

Yodzis, 10