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| Number | Paper Title | Authors | Paper Type | Summary (of relevant information for wider reaching papers) | Link |
| 1 | The Evolutionary Interplay between Adaptation and Self-Fertalization | Hartfield et al (2017) | Review | Selfing may change the characteristics of adaptation in a population, limiting adaptation (removing ‘Haldane’s Sieve’, increasing selective interference (due to the lower efficiency of recombination), reducing Ne (so adaptation from standing variation is less likely) and changing the relative emergence properties of dominant and recessive genes | <https://www.sciencedirect.com/science/article/pii/S0168952517300550> |
| 2 | The Ecological Flora Database | Fitter and Pear (1994) | Study | This paper provides background to the Ecological Flora Database and examples of two-parameter comparisons that could be completed using it | <https://www.jstor.org/stable/2261309?seq=1> |
| 3 | The comparative biology of pollination and mating in flowering plants | Spencer et al (1996) | Study | Selfers were found to have a lower pollen/ovule ratio and larger pollen grains via competitive analysis, and selfing was found to be more common in herbaceous annuals. | <https://royalsocietypublishing.org/doi/10.1098/rstb.1996.0110> |
| 4 | The selfing syndrondrome: a model for studying the genetic and evolutionary basis of morphological adaptation in plants | Sicard and Lenhard (2011) | Review | A review of the evolution of selfing syndrome, including differing sex allocation (with the pollen-ovule ratio being lower in selfers) and flower morphology (selfing flowers tend to have smaller flowers with reduced herkogamy) with some additional information on the underlying genetics of these change | <https://academic.oup.com/aob/article/107/9/1433/167255> |
| 5 | The Evolutionary Enigma of Mixed Mating Systems in Plants: Occurrence, Theoretical Explanations, and Empirical Evidence | Goodwillie et al (2005) | Review | A review of the background to mating systems and the different mechanisms involved in mixed mating systems, and the evolutionary theories which may explain it | <https://www.jstor.org/stable/30033796?seq=1#metadata_info_tab_contents> |
| 6 | Global biogeography of mating system variation in seed plants | Moeller et al (2017) | Study | A correlation between life history, growth form, latitude and biome, respectively, and outcrossing were found, but only life history and growth form predicted outcrossing rates when all four variables were considered together. Both life history and growth form varied significantly with latitude. Although there was variation in outcrossing rates between biomes (rates being lower in chaparral/Mediterranean biome), the distribution of the data and the means were quite consistent. | <https://onlinelibrary.wiley.com/doi/full/10.1111/ele.12738?saml_referrer> |
| 7 | Self-compatibility is over-represented in islands | Grossenbacher et al (2017) | Study | Previous studies don’t show consensus in support for Baker’s Law, the authors used a large dataset of secondary data and found self-compatibility is overrepresented on islands. Supplementary analyses were used to show some alternative explanations for this result other than Baker’s Law (such as island speciation or loss of self-incompatibility following island colonisation) don’t explain this result. | <https://nph.onlinelibrary.wiley.com/doi/full/10.1111/nph.14534> |
| 8 | Geographic range size is predicted by plant mating system | Grossenbacher et al (2015) | Study | Selfers tend to have larger ranges than outcrossing sister groups and may also show a higher maximum latitude, but this may be instead attributable to ploidy or life history | <https://onlinelibrary.wiley.com/doi/abs/10.1111/ele.12449> |
| 9 | Natural selection on the *Arabidposis thaliana* genome in present and future climates | Exposito-Alonso et al (2019) | Study | The authors found that allele frequencies in *A. thaliana* will change more rapidly in response to a low precipitation environment than in response to a high precipitation one. They also produced a model to predict the effect of precipitation change on selection. | <https://www.nature.com/articles/s41586-019-1520-9> |
| 10 | Mating system shifts and transposable element evolution in the plant genus *Capsella* | Ågren et al (2014) | Study | The authors found no specific relationship between mating system and transposable element content, with *Capsella orientalis* (a selfing species) showing very low numbers of TEs, but *C. rubella* (selfing) having more TEs than the closely related *C. grandiflora* (SI). | <https://bmcgenomics.biomedcentral.com/articles/10.1186/1471-2164-15-602> |
| 11 | A metapopulation perspective on genetic diversity and differentiation in partially self-fertilizing plants | Ingvarrson (2002) | Theory | Selfing has less of an effect on the genetic diversity of a metapopulation as the decrease in genetic diversity caused by selfing is balanced by the reduction in gene flow via pollen, which allows greater diversity to accumulate between individuals. | <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.0014-3820.2002.tb00162.x> |
| 12 | Genomic consequences of outcrossing and selfing in plants | Wright et al (2008) | Review | Review of the theoretical mechanisms of fitness decline avoidance associated with selfing evolution, including purging, evolution of higher recombination rates, increased mutation rates, the prevalence of selfish genetic elements and reduction in genome size | <https://www.journals.uchicago.edu/doi/full/10.1086/523366> |
| 13 | Genome size variation and evolution in *Veronica* | Albach and Greilhuber (2004) | Study | Genome size is smaller in selfing than outcrossing groups and annual than perennial groups in *Veronica* | <https://academic.oup.com/aob/article/94/6/897/264570> |
| 14 | A role for nonadaptive processes in plant genome size evolution? | Whitney et al (2010) | Study | When controlled for effective population size, there was a positive correlation between outcrossing rate & outcrossing index and genome size, but this disappeared when corrected for phylogenetic relatedness, but the authors suggest there could be some error introduced by ancient genome duplications in different lines | <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1558-5646.2010.00967.x> |
| 15 | The genome-wide dynamics of purging during selfing in maize | Roessler et al (2019) | Study | When maize lines were self-fertilized, 3/11 lines showed genome reduction. Changes in genome size correlated most strongly with TE content (the only significant correlation when all components were combined into a single linear model). The proportion of derived alleles across sites declined slightly for non-coding and synonymous mutations and more rapidly in putatively deleterious sites. | <https://www.nature.com/articles/s41477-019-0508-7> |
| 16 | Breeding systems and genome evolution | Charlesworth and Wright (2001) | Review | A review of the effects of selfing on intraspecific diversity and the efficacy of selection | <https://www.sciencedirect.com/science/article/abs/pii/S0959437X00002549> |
| 17 | Impact of mating systems on patterns of sequence polymorphism in flowering plants | Glémin et al (2006) | Study | Mating system was found to have a significant effect on degree of sequence polymorphism (measured using nucleotide/haplotype diversity), linkage disequilibrium. Higher PC content was found in outcrossing Poaceae. | <https://royalsocietypublishing.org/doi/abs/10.1098/rspb.2006.3657> |
| 18 | Patterns of nucleotide diversity in two species of *Mimulus* are affected by mating system and asymmetric introgression | Sweigart and Willis (2007) | Study | Intraspecific genetic variation was much lower in *Mimulus nasutus* (a selfing species) than *M. guttatus* (a closely related outcrossing species). *M. nasutus* also had more polymorphisms at replacement positions in the *mCYCA* and *mAP3* genes, which are more likely to be deleterious, however the difference between replacement and synonymous mutations wasn’t significant (due to low number of polymorphisms segregating in *M. nasutus*?). There is evidence for the introgression from *M. nasutus* into *M. guttatus*. | <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.0014-3820.2003.tb01494.x> |
| 19 | Loss of self-incompatibility and its evolutionary consequences | Igic et al. (2008) | Review | Loss of self-incompatibility is a lot more widely spread than gain and is generally irreversible due to reduced diversity at S-loci and loss-of-function mutations in genes involved in self-incompatibility. Self-compatibility is more common on islands, in herbaceous taxa and in temperate species (the second and third points are confounded). | <https://www.journals.uchicago.edu/doi/abs/10.1086/523362?journalCode=ijps> |
| 20 | Self-fertilization and the evolution of recombination | Roze and Lenormand (2005) | Study | Both sporophytic and gametophytic selfing influence the evolution of recombination in the authors’ model by altering the relative importance of different components of epistasis to the evolution of recombination.  **Don’t really understand this paper too well** | <https://www.genetics.org/content/170/2/841.short> |
| 21 | Transposable element number in mixed mating populations | Morgan (2001) | Theory | The author’s simulation suggests different patterns of transposable element number in selfing and outcrossing species, with element number decreasing under a synergistic (deleterious insertion) model or under an section exchange model when homozygous elements are more likely to exchange than heterozygous ones with increased selfing, and increasing under an ectopic exchange model when homozygous elements are less likely to exchange than heterozygous ones with increased selfing. Transposable elements may be restricted to genomic regions of selfing species’ genomes. | <https://www.cambridge.org/core/journals/genetics-research/article/transposable-element-number-in-mixed-mating-populations/0E628C3FE5964C3B0912507D215BE7F4> |
| 22 | The evolution of self-regulated transposition of transposable elements | Charlesworth and Langley (1986) | Review | Self-regulation of transposable elements should be selected for in species with high levels of inbreeding due to the rapid exposure of recessive mutations to selection and the reduced efficiency of recombination, but evidence is lacking. | <https://www.genetics.org/content/112/2/359.short> |
| 23 | Selfish DNA and breeding system in flowering plants | Burt and Trivers (1998) | Study | Modelling showed that the equilibrium frequency of individuals containing parasitic B chromosomes would be expected to be lower at higher rates of outcrossing. B chromosomes were present in a higher proportion of outcrossing species than selfing.  **Data section may be useful -> based on similar principles to project** | <https://royalsocietypublishing.org/doi/abs/10.1098/rspb.1998.0275> |
| 24 | Benefits of autonomous selfing under unpredictable pollinator environments | Kalisz and Vogler (2003) | Study | Some individuals in *Collinsia verna* self at either the same time or after outcrossing pollination, with the rate of selfing varying between individuals. Selfing significantly increases fruit set across all levels of resource availability. In the pollinator-exclusion experiment, Fruit set didn’t differ between flowers that were hand-outcrossed or hand-self-pollinated, but flowers that were not pollinated (autonomous self-fertilization) showed decreased fruit set later in the flowerings season. | <https://esajournals.onlinelibrary.wiley.com/doi/full/10.1890/02-0519?casa_token=3_8kvWKcqOYAAAAA%3AJpAsgu75u8GtNp2VNDWOxqkyH-S2Df6fNfSrZ9_lzpluL7Z88DY2X1TDpactsG1EJlP-BY4WI8a3y1Y> |
| 25 | Reproductive system of a mixed-mating plant responds to climate perturbation by increased selfing | Jones et al. (2013) | Study | Increased fruit production from cleistogamous flowers and increased viability of seeds from self-fertilizing chasmogamous flowers (together representing an increase in selfing), as well as an increase in plant size, were seen in response to elevated temperatures in *Viola praemorsa*, which shows a mixed-breeding system. | <https://royalsocietypublishing.org/doi/full/10.1098/rspb.2013.1336> |
| 26 | Grazing alters insect visitation networks and plant mating systems | Vanbergen et al (2014) | Study | Grazed habitats showed larger, more diverse networks with more pollinators per plant. *Cirsuim palustre* showed an increase in outcrossing with grazing. Outcrossing was negatively correlated with network diversity in both grazed and ungrazed sites. | <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/1365-2435.12191> |
| 27 | Plant mating systems and accessing population persistence in fragmented landscapes | Coates et al (2007) | Study | Some native plants in south-western Australia which are self-compatible and generally woody perennials show decreased outcrossing rates in disturbed populations (which may be due to reduced pollinator foraging), but no relationship was seen between outcrossing and population size. | <https://www.researchgate.net/profile/David_Coates7/publication/240509503_Coates_DJ_Sampson_JF_Yates_CJ_Plant_mating_systems_and_assessing_population_persistence_in_fragmented_landscapes_Aust_J_Bot_55_239-249/links/55d5271b08ae1e65166374cf/Coates-DJ-Sampson-JF-Yates-CJ-Plant-mating-systems-and-assessing-population-persistence-in-fragmented-landscapes-Aust-J-Bot-55-239-249.pdf> |
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