

BIO 4AE3 . Oct 8

qualitative and quantitative
resistance

recognition/
evasion
antibodies/
antigen

immune
effector cells
(parasite-
killing)
vs
parasite
reproduction
REGULATORY
changes

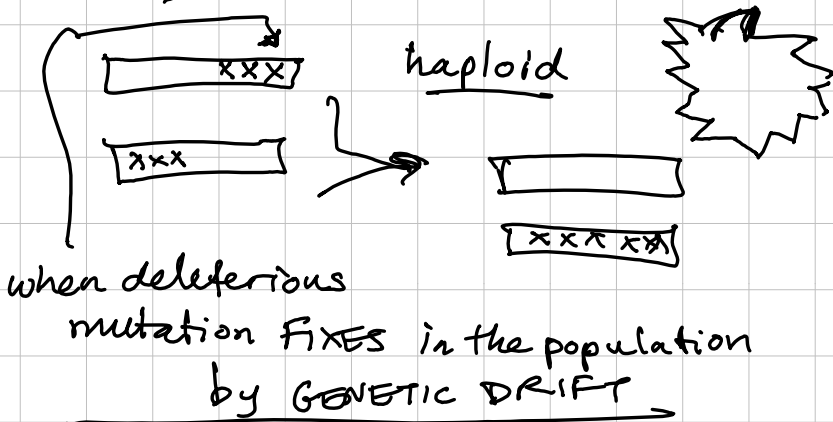
coding sequence
changes

Costs of sex - COST of MEIOSIS x2
- mating failure
- outbreeding depression

• advantages of sex .

MULLER'S RATCHET

1950s?



"KONDRAKOV'S HATCHET" 1973

version of MR that depends on
epistasis

→ RECOMBINATION exposes
deleterious alleles (combinations)
to selection

mutational PURGING

pop. genetic explanations

ecological explanations

↳ variation and environment

↳ GENOMIC variation,
not ALLELIC variation

↳ EPISTASIS

• 'hard' habitat selection

• there are NICHTES that are
unavailable to asexual lineages.

→ sexual lineages may be able to
make it through bad times

• 'soft' selection -

everybody can survive everywhere
but sexuals can compete better

↳ RED QUEEN:
parasites are part of the environment
REACTIVE/coevolving part of
the environment

SNAILS
(NZ mud snail)

cestode parasite
(Microphallus)
(castrator)

