

ELENCO N. 1

1A) Descriva sommariamente il protocollo di preparazione di una libreria 2Brad

1B) Se dovesse effettuare un'analisi di *relatedness* tra organismi di una specie non-modello per cui non sono disponibili marcatori genetici come procederebbe?

1C) Quali software potrebbe utilizzare per effettuare uno scoring di loci microsatellite.

Accertamento linguistico :

Adaptive genetic diversity is a key factor in conservation planning as it relates to the evolutionary potential of populations and their responses to environmental change. Developments in landscape genomics have fostered a proliferation of tests for selection that aim to identify candidate adaptive markers in natural populations. However, these tests rely on different assumptions and may produce contrasting results. Here we applied six tests for selection in a range-wide genomic scan of an Iberian amphibian, *Pelobates cultripes*, which shows spatially structured genetic variation across its range, encompassing different bioclimatic zones.



ELENCO N. 2

2A) Come procederebbe per predisporre un pannello di microsatelliti da una specie non modello?

2B) Come potrebbe analizzare la diversità genetica in organismi tetraploidi?

2C) Come genererebbe un input file per il software Arlequin?

Accertamento linguistico :

The tule elk (*Cervus canadensis nannodes*) is a California endemic subspecies that experienced an extreme bottleneck (potentially two individuals) in the mid-1800s. Through active management, including reintroductions, the subspecies has grown to approximately 6000 individuals spread across 22 recognized populations. The populations tend to be localized and separated by unoccupied intervening habitat, prompting targeted translocations to ensure gene flow. However, little is known about the genetic status or connectivity among adjacent populations in the absence of active translocations.

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ELENCO N. 3

3A) Quali possibili problemi tecnici possono essere incontrati nell'analisi di sequenza diretta di un prodotto di PCR di regioni nucleari e come potrebbe risolverli?

3B) Come affronterebbe il problema dei contaminanti nella preparazione di una libreria di metabarcoding nelle analisi di eDNA a partire da campioni ambientali

3C) Quali programmi utilizzerebbe per effettuare multi-alignamenti di sequenze?

Accertamento linguistico:

Habitat fragmentation and degradation have led to a proliferation of small and isolated populations that are vulnerable to genetic erosion. Reduction in habitat and concomitant declines in population connectivity can expediate the collapse of species that exist as natural metapopulations. In recent years, Allegheny woodrats (*Neotoma magister*) have experienced local extirpations and declines in genetic diversity across their range due to disease-related mortality, reduced food availability, and disruption of connectivity among subpopulations. In response, we developed a captive-breeding program to facilitate genetic management of isolated woodrat populations in Indiana.

