

N Rodríguez-Ezpeleta *et al.* – Supporting Information

WebPanel 2. RAD-seq genotyping

The number of RAD-seq reads passing quality filters per individual included in the final analyses ranged from 868,453 to 14,146,731, with an average of 4,430,279. The average number of RAD-tags (loci) per individual was 65,000 and 49,000 for catalogs with and without PCR clones, respectively, and overall coverage was 67 \times and 27 \times for each case. In total, eight catalogs were created (see below) resulting from alternative combinations of orthologous loci identification parameters and removal or non-removal of PCR clones. The number of tags present in at least 75% of individuals ranged from 30,077 to 41,968, and the number of SNPs after applying selection filters ranged from 7588 to 13,226. The number of individuals passing inclusion criteria ranged from 180 to 204 in catalogs including all samples, and from 146 to 165 in catalogs including only Mediterranean Sea samples.

| Catalog | Sample | clone_filter | ustacks | | cstacks | RAD loci (>75% ind) | Final dataset | |
|---------|--------|--------------|----------|----------|----------|------------------------|---------------|--------|
| | | | <i>m</i> | <i>M</i> | <i>n</i> | | Individuals | SNPs |
| 1 | All | No | 5 | 2 | 3 | 39,810 | 204 | 9871 |
| 2 | All | No | 5 | 4 | 6 | 41,968 | 204 | 11,246 |
| 3 | All | Yes | 3 | 4 | 6 | 37,089 | 200 | 7588 |
| 4 | All | Yes | 5 | 4 | 6 | 30,077 | 180 | 8527 |
| 5 | Med | No | 5 | 2 | 3 | 37,538 | 165 | 11,315 |
| 6 | Med | No | 5 | 4 | 6 | 40,290 | 165 | 13,226 |
| 7 | Med | Yes | 3 | 4 | 6 | 36,379 | 162 | 10,496 |
| 8 | Med | Yes | 5 | 4 | 6 | 31,193 | 146 | 12,613 |

Details for each catalog constructed using all (Sample: All) or only Mediterranean Sea (Sample: Med) samples, removing PCR duplicates (clone_filter: yes) or not (clone_filter: no), and using different *m*, *M*, and *n* parameter combinations, and, for each, number of RAD loci present in at least 75% of the individuals, and number of individuals and SNPs remaining after catalog filtering.