PREDICTING SUITABLE HABITAT FOR DALMATIAN PYRETHRUM (*TANACETUM CINERARIIFOLIUM* /Trevir. / Sch. Bip.) IN CROATIA

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Suitable Habitat Modelling

• Predict the potential distribution of a species based on finding suitable habitat

• Different for each species based on habitat requirements
Dalmatian pyrethrum
Data

- Herbarium collections
- Literature
- Field studies
- 871 recorded locations
- Sample size: 224
- Annual Mean Temperature
- Mean Diurnal Isothermality
- Temperature Seasonality Max
- Temperature of Warmest Month
- Temperature Annual Range Mean
- Temperature of Wettest Quarter
- Mean Temperature of Driest Quarter
- Mean Temperature of Warmest Quarter
- Mean Temperature of Coldest Quarter
- Annual Precipitation
- Precipitation of Wettest Month
- Precipitation of Driest Month
- Precipitation Seasonality
- Precipitation of Wettest Quarter
- Precipitation of Driest Quarter
- Precipitation of Warmest Quarter
- Precipitation of Coldest Quarter
Variable selection

01  CORRELATION BETWEEN VARIABLES
02  BUILDING CANDIDATE SETS OF VARIABLES (90)
03  GENERATING AND COMPARING MODEL PERFORMANCE (MAXENT)
04  SELECTING THE BEST MODEL BASED ON $\text{AIC}_C$ (ENMTOOLS)
# Best Model

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>% CONTRIBUTION</th>
<th>PERMUTATION IMPORTANCE</th>
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</thead>
<tbody>
<tr>
<td>Isothermality</td>
<td>39.5</td>
<td>11.5</td>
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<td>Mean Temperature of Driest Month</td>
<td>37.7</td>
<td>54.2</td>
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<tr>
<td>Precipitation Seasonality</td>
<td>11</td>
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<td>Temperature Seasonality</td>
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<tr>
<td>Mean Temperature of Wettest Month</td>
<td>2.1</td>
<td>0.3</td>
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</tbody>
</table>
• **Suitable areas in Croatia:**
  - Istria
  - Islands
  - South of Dalmatia

• **Neighboring countries**
  - Bosnia and Herzegovina
  - Montenegro
  - Albania
Future Research

- Upcoming field studies
- Expanding the Model
- Change in distribution due to climate change
- Incorporation of genetic data
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Genetic background of Dalmatian pyrethrum (*Tanacetum cinerariifolium* /Trevir./ Sch. Bip.) insecticidal potential (PyrDiv) (IP-06-2016-9034)