**RECOVERING CLIMATIC DATA FROM DOCUMENTARY SOURCES: A CASE STUDY OF THE CLIMATE IN SOUTHERN SPAIN FROM 1792 TO 1808**

F.S. RODRIGO

Dep. Chemistry and Physics, University of Almería, Spain

frodrigo@ual.es

**SUPPLEMENTARY MATERIAL**

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Figure S1. (a) Number of seasonal records in Seville, 1792-1808, and combined temperature-rainfall conditions for winter (b), spring (c), summer (d), and autumn (e). Years are indicated by the last two digits.

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Figure S2. As Fig. S1, for Córdoba.

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Figure S3. As Figure S1 for Jaén.

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Figure S4. As Figure S1 for Granada.

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Figure S5. As Figure S1 for Murcia.

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Table S1. Reports dated from 18 to 20 January 1799 (issues 6-11, 1799, Figure 6a).

|  |  |  |  |
| --- | --- | --- | --- |
| **Province** | **Date** | **Text (ancient Spanish)** | **Text (English)** |
| Cuenca | 18/01/1799 | yela mucho | It freezes a lot |
| Catalonia | 18/01/1799 | Muy frío y yela bastante | Very cold and it freezes enough |
| Toledo | 19/01/1799 | despejado | Cloudless |
| Avila | 19/01/1799 | Continúan los yelos | Ice continues |
| Segovia | 19/01/1799 | Hace frío con nieblas | It is cold with fog |
| Zamora | 19/01/1799 | Continúan los yelos | Ice continues |
| Toro | 19/01/1799 | Continúan los yelos | Ice continues |
| Soria | 19/01/1799 | Despejado con escarchas | Cloudless with frost |
| Oviedo | 19/01/1799 | Continúan los frios | Cold continues |
| Galicia | 19/01/1799 | Hace un tiempo propio de la estacion | Weather typical of the season |
| Valencia | 19/01/1799 | Yela mucho | It freezes a lot |
| Seville | 19/01/1799 | Sereno y frío | Quiet and cold |
| Granada | 19/01/1799 | Caen grandes escarchas poco comunes en este país | Great frosts, rare events in this country |
| Jaén | 20/01/1799 | Sereno y frío | Quiet and cold |

Table S2. Reports dated from 12 to 14 April 1793 (issues 8-11, vol. 2, 1793, Figure 7a).

|  |  |  |  |
| --- | --- | --- | --- |
| **Province** | **Date** | **Text (ancient Spanish)** | **Text (English)** |
| Madrid | 12/04/1793 | Ha llovido abundantemente | It has rained abundantly |
| Oviedo | 12/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| La Mancha | 12/04/1793 | Ha llovido abundantemente | It has rained abundantly |
| Cuenca | 12/04/1793 | Claro y templado | Clear and mild |
| Segovia | 13/04/1793 | Ha llovido y nevado bien, lo que ha sido muy provechoso | It has rained and snowed well, very beneficial for fields |
| Valladolid | 13/04/1793 | Ha llovido y nevado bien, lo que ha sido muy provechoso | It has rained and snowed well, very beneficial for fields |
| Extremadura | 13/04/1793 | Muy favorable | Very favourable |
| Murcia | 13/04/1793 | Siguen las rogativas para alcanzar el agua, que se necesita bastante | Rogations praying for water continue, it is quite necessary |
| Seville | 13/04/1793 | Ha llovido abundantemente | It has rained abundantly |
| Málaga | 13/04/1793 | Ha llovido abundantemente | It has rained abundantly |
| Avila | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Aragón | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Burgos | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Zamora | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Soria | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Toro | 13/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |
| Jaén | 13/04/1793 | Han continuado las nieves y lluvias | Snow and rain have continued |
| Granada | 13/04/1793 | Han continuado las nieves y lluvias | Snow and rain have continued |
| León | 14/04/1793 | Siguen las lluvias y nieves favorables para los campos | Rain and snow favourable for fields continue |

Table S3. Reports dated from 15 to 17 July 1796 (issues 57-60, 1796, Figure 8a).

|  |  |  |  |
| --- | --- | --- | --- |
| **Province** | **Date** | **Text (ancient Spanish)** | **Text (English)** |
| Burgos | 15/07/1796 | Sereno con vientos levantes | Quiet with east winds |
| La Mancha | 15/07/1796 | despejado | Cloudless |
| Granada | 15/07/1796 | Prosiguen los calores | Warm continues |
| Avila | 16/07/1796 | Caloroso y conveniente para las labores actuales del campo | Warm and convenient for field works |
| Segovia | 16/07/1796 | Caloroso y conveniente para las labores actuales del campo | Warm and convenient for field works |
| Salamanca | 16/07/1796 | Caloroso y conveniente para las labores actuales del campo | Warm and convenient for field works |
| Zamora | 16/07/1796 | Calores propios de la estacion | Warm typical of the season |
| Toro | 16/07/1796 | Calores propios de la estacion | Warm typical of the season |
| Valladolid | 16/07/1796 | Calores propios de la estacion | Warm typical of the season |
| Aragón | 16/07/1796 | Calores excesivos | Excessive warm |
| Valencia | 16/07/1796 | apacible | Mild |
| Toledo | 17/07/1796 | Sereno | Quiet |
| Córdoba | 17/07/1796 | Sereno y favorable para la recolección de frutos | Quiet and favourable for fruit harvesting |

Table S4. Reports dated from 21 to 23 November 1794 (issues 94-99, 1794, Figure 9a).

|  |  |  |  |
| --- | --- | --- | --- |
| **Province** | **Date** | **Text (ancient Spanish)** | **Text (English)** |
| Madrid | 21/11/1794 | Ha llovido copiosamente | It has rained copiously |
| La Mancha | 21/11/1794 | Ha llovido bastante para concluir la sementera | It has rained sufficient to finish the sowing |
| Segovia | 22/11/1794 | Ha serenado el tiempo despues de haber llovido | It has become quiet after rain |
| Murcia | 22/11/1794 | Seco y sereno | Dry and quiet |
| Zamora | 22/11/1794 | Está el tiempo metido en aguas | Rainy |
| Salamanca | 22/11/1794 | Está el tiempo metido en aguas | Rainy |
| Burgos | 22/11/1794 | Está el tiempo metido en aguas | Rainy |
| Aragón | 22/11/1794 | Continua la sequedad | Dryness continues |
| Seville | 22/11/1794 | Copiosa lluvia | Copious rain |
| Galicia | 22/11/1794 | Frío y lluvioso | Cold and rainy |
| Catalonia | 22/11/1794 | Vario y frio | Variable and cold |
| Córdoba | 23/11/1794 | Ha llovido y sigue lloviendo | It has rained, and the rain continues |
| Jaén | 23/11/1794 | Ha llovido abundantemente | It has rained abundantly |
| Granada | 23/11/1794 | Ha llovido abundantemente | It has rained abundantly |