

# Pecora consectari: transhumance in Roman Spain

by

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*Abstract:*

Although ancient authorities mainly described Spain as a herdsmen's country and often praised the number and quality of her livestock, there are no reliable proofs of transhumance before the Visigothic period. Nevertheless, indirect evidence suggests that herds were moving between seasonal grazing areas even during the time of the Roman conquest. Later on, several legal documents are better explained invoking the interest of cities and individuals in controlling alternative pasture lands, and some migratory patterns seem to conform nicely with traditional transhumance's areas and with the routes linking them.\*

On the eve of invading Italy, Hannibal harangued the Spanish troops of his armies by promising them future victories which would compensate for their efforts: *satis adhuc in uastis Lusitaniae Celtiberiaeque montibus pecora consectando nullum emolumentum tot laborum periculorumque uestrorum uidistis* (Liv. 21.43.8). Even though the historicity of the speech is questionable, Hannibal's words are useful to understand how Central and Western Spain was seen in the 1<sup>st</sup> century B.C.: an untamed, rough, uninhabited, and poor land, where most of the population was devoted to herding. Livy's (or Hannibal's) descriptions of the Iberian Peninsula as a shepherds' country agree with other evidence about the importance of stock breeding and the outstanding quality of some products: superb horses (Plin. *HN* 8.67.166), the first-rate wool from Baetica and Lusitania (Plin. *HN* 8.73.191) and the famous hams from some mountain regions (Str. 162 C, cfr. Mart. 13.54). We also know about large herds by the rivers' mouths (Str. 143 C; Diod. Sic. 4.18.3), the key role of sheep to nourish the interior peoples (Avian. *Or.mar.* 485), the appreciated Celtiberian mules (Plin. *HN* 8.68.170) or the large size of the Lusitanian pig race (Varr. *Rust.* 2.4.11); finally, a text by Columella (*Rust.* 7.2.4) reveals a singular experiment to improve the color and fineness of wool. In addition, archeological reports yield many references to shepherds' tools, even though their preservation is difficult because they were of low-quality and made of perishable materials.<sup>1</sup> Sometimes, we are told about the discovery of folds or sheds for animals, not to mention herding motifs in sculptures or decorations, such as the

magnificent mosaic in the *triclinium* of the sumptuous *villa* of Cuevas de Soria, featuring the iron brand of the house's owner (*Fig. 1*).<sup>2</sup> Finally, animal bone finds bear witness of a notable level of consumption of beef, sheep and pig in cities, villages and farms.<sup>3</sup>

This is hardly surprising taking into account that a big section of the Iberian Peninsula is not suitable for agriculture because of its high altitude, the steep hills and the dryness produced by the long distance from the sea. However, as soon as written testimonies are available, there is a confirmation that Spaniards have known how to take advantage of marginal agricultural areas by using them as pasture fields and by moving herds between them to avoid the excessive thermic contrasts and the irregular rains.<sup>4</sup> According to archeologists, ever since the Bronze Age some habitation places were used on a temporarily basis, suggesting an early low-range herding movement.<sup>5</sup> The main proof that transhumance was an economic activity especially adapted to the Iberian Peninsula's ecological conditions was the emergence of the *Mesta*, the foremost example of Mediterranean shepherds' organization. This powerful and rich syndicate was born in the medieval Kingdom of Castile and during centuries supervised each year the transhumance of thousands of herds, established the season pastures, marked paths between them, defended herders on transit, and obliged them to pay a toll in certain spots.<sup>6</sup> Up to the half of the last century, flocks were still moving regularly through the Italian *tratturi*, and the Spanish *cañadas* and *cordeles* reflected grazing practices documented in Italy as soon as the 3<sup>rd</sup> century BC and in Greece two centuries before.<sup>7</sup> Thus, transhumance became one of the most characteristic features of Mediterranean *longue durée* and a *raison d'être* of many events for which there is not a better or a more convincing explanation.<sup>8</sup>

An often quoted *dictum* by Cato affirmed that good livestock management (*bene pascere*) was the quickest and better way to become rich. Hence, it is not strange that Romans introduced transhumance in those provinces with adequate climatic conditions, enough capital for animal breeding, and plenty of vacant pasturelands.



Fig. 1. Mosaic from the Roman *villa* in Cuevas de Soria, now in the Museo Arqueológico Nacional de Madrid (Courtesy of the M.A.N., Madrid).

There is evidence that suggests transhumance in *Sicilia*, *Epirus*, *Illiricum*, *Narbonensis* and *Sardinia*.<sup>9</sup> On the other hand, it is still a little mystery when transhumance began in Spain. The *Mesta*'s lawyers and publicists firmly believed that it was practiced from time immemorial and quoted ancient authorities such Varro's second book on *Rustica* to justify their privileges and usages. This idea survived after the *Mesta*'s abolition thanks to scholars of the last century for whom transhumance was a logical consequence of climate and the physical features of the land. Yet, a careful reading of ancient sources cuts down to size all these theories: Columella, who knew very well the situation of Spanish stockbreeding, does not mention other kinds of livestock raising than that happening on farms. Moreover, the few standing ancient texts on herds on the move explain it as a consequence of cattle rustling, a self-explanatory motive considering what Greek and Romans thought of the people and living conditions in Central Spain and a very useful one, since it justified military intervention. An example of what I say are the annual clashes between Romans and Lusitanians that Livy (35, 1; 37, 57; 39, 21; 39, 30-31; y 40, 33) says took place between 193 and 180 B.C. in Baetica and its surroundings; the legions made easy prey of the Spaniards, because they were hampered by herds, allegedly the result of their plunder.<sup>10</sup>

For this reason, we cannot talk safely about transhumance in the Iberian Peninsula until Visigothic times (5<sup>th</sup>-8<sup>th</sup> centuries). The archive of Huesca's cathedral (old *Osca*, see Fig. 2 and Barrington 25 E3)<sup>11</sup> preserves bishop *Vincentius*' will (6<sup>th</sup> century) that establishes the destiny of [...] in *terra Boletana*, *Senguanis porcionem meam*; *Isusti porcionem meam*; *estiva Saldana porcionem meam*, *vel alias estivolas ubi me porcio consingit*, that is to say, the usage rights (*portiones*) that the deceased has in some *aestivae et aestivolae* in the territory of ancient *Boletum* (Barrington 25 F3), nowadays Boltaña. Huesca is located on the southern slope

of the mountainous borders of the River Ebro's depression, one of the aridest areas in the Peninsula, whereas Boltaña lies on the northern side of the pre-Pyrenees sierras, 650 meters high, and with a temperature and rainfall typical of mountain zones. Although only sixty kilometers separate both places, bishop *Vincentius*' possessions reveal a property régime adapted to alternative cattle movements between the summer fresh pastures in the hills and the winter ones in the warmer Ebro Valley.<sup>12</sup> Some time after the *testamentum Vincentii Episcopi*, a passage from Valerio del Bierzo's hagiography contains an indirect reference to another case of transhumance.<sup>13</sup> The story is told about the serious accident that a noble lady and her suite suffered when a stampeding drove invaded the *publica strata* on which they were traveling and knocked them down. An unfortunate incident, but not out of place in the country, and what makes it significant for our purposes is the text stating that animals and shepherds were a numerous group (*multitudo hominum, multa bovum*) on their way to a grazing area (*iuga ducti*), and that the incident happened *propinquante vindemiae tempore*. In other words, we are dealing with herdsmen leaving El Bierzo district—the zone of middle-high mountains between León and Galicia where Valerio lived—, on their way to the southern winter grazing lands. A famous *cañada* called *la Vizana* linked El Bierzo and the nearby mountain areas with the warmer intermediate region of the Tagus and Guadiana Rivers and evidences the district's dedication as summer grazing area.<sup>14</sup> Despite Lady Theodora's tragic incident, the *lex Visigothorum* defended the right of people and animals to move freely. It was a felony to block with walls or fences public ways, as well as to work, enclose or occupy the sixty-foot buffer space that had to exist at both sides of the road. Consequently, passers-by had the right to remove or demolish any obstacle that prevented the transit through a public way, or the use of the unfenced, uncultivated and fallow lands to feed their cattle. Land owners were punished if they expelled or locked up the animals, and their authorization was needed only if the cattle remained in the same place for more than two days; moreover, the traveler was compensated if he or his properties were damaged by traps or ditches, if he was illegally arrested, or if he was robbed or suffered ill-treatments. Although it is a temptation to consider that these dispositions aimed to protect and promote the freedom of transit and commerce, scholars suggest that the legislator was more likely thinking about the shepherds that periodically moved their cattle from the low lands to the summer mountain pastures and vice versa.<sup>15</sup> Such goal seemed to be confirmed by a procedure to recover stray animals established in the Visigothic code, which is widely regarded as a precedent of those drovers' meetings called *Mixtas* or *Mestas*, from which the name of the late *Honrado Concejo de la Mesta* derived. Although the Visigothic *Regesta* pertains to the 5<sup>th</sup> and 6<sup>th</sup> centuries, scholars agree it is mainly a compilation of Roman Common Law. As a comparison, in Italy there is a legal continuity between the *lex agraria* of 111 B.C. and the Ostrogothic edict partially preserved in an often quoted





Fig. 2. Map of the Spain showing main places cited in the text. The map's background is from Interactive Ancient Mediterranean Web site (<http://iam.classics.unc.edu>). © Interactive Ancient Mediterranean.

inscription found somewhere in the *tratturo* between *Bucca* and the River *Biferno*.<sup>16</sup>

This legal continuity makes even more surprising the situation in Roman Spain. There are no reliable proofs of transhumance, but we do have a few indirect evidences that admit a grazing explanation. Let us take, for instance, transhumants' needs to secure seasonal pastures, such as the *portiones* of bishop *Vicentius* of *Osca*. A series of characteristically Spanish epigraphic documents named *tesserae hospitales* seem to indicate the geographical relationships produced by the seasonal migrations of herds, hence they have been interpreted as presumed agreements between individuals and groups that dwelled in distant places, but this hypothesis has to be proven with more solid arguments.<sup>17</sup> It is easier to prove how some Spanish Roman cities chose to set up their *territorium* between complementary ecological zones. Two boundary stones from the end of the 1<sup>st</sup> century A.D. separated the land of the *Ucu-*

*bitani* (Barrington 26 F2) from those belonging to the *Emeritenses* and *Lacinimurgenses* (Barrington 26 E2). Since *Ucubi* (Barrington 2 A4) and *Emerita Augusta* (Barrington 26 D3) were Roman colonies respectively located at 200 and 60 km in a straight line from the finding place of the stones, the boundaries pertained to what Romans surveyors called a *praefectura*. The main reasons that explain the existence of these *loca adsignata in alienis finibus* seemed to be grazing and forest exploitation, which are precisely the traditional activities of the district.<sup>18</sup> *Emerita* was already a famous case among the *gromatici* because of its wide territory and the number of *praefecturae* that it included, but we would never know anything about *Ucubi's* situation were it not for these inscriptions. Nevertheless, a report about the time of the *Munda* campaign (*Bhisp.* 22.7) tells how the *Ucubitani* fled massively towards *Baeturia* (Barrington 26 E3), the ancient name for the district to which *Lacinimurga* and the *praefectura Uccubitanorum* belonged.





Fig. 3. Cast of CIL II, 3334, now in the Museo Arqueológico Nacional de Madrid (Courtesy of the M.A.N., Madrid).

*Ucubi* and nearby cities were famous in Roman times because of the quality and the dark wool of the local flocks. However, sheep are incompatible with the heavy drought and high temperatures prevalent in the district during summer. This surely justifies why *Ucubi* has jurisdiction over far-off places, and obliges us to consider if two other legal documents were not also part of the strategy to secure alternate grazing lands. *Ucubi* subscribed *hospitium* agreements with the *Senatus populusque Iptuccitanorum* (31 A.D.), and with the *Senatus populusque Baxonensis*, three years later. Although the causes or the effects of the agreements are not stated, *Iptucci* (Barrington 26 E5) is located in a mountain district with the highest rainfall in the Peninsula. *Baxo*'s precise location is unknown, but evidence leads us to think that it was possibly located in the region near the Sierra Nevada. In both cases, they were grazing areas very appropriate for herds forced out of the Baetis Valley by summer drought and excessive heat.<sup>19</sup>

Another interesting document recently discovered and clearly related to drovers is an altar consecrated to the *domina Pales*, the goddess that Romans called *pastorum domina, dea pabuli, conservatrix animalium* and other epithets related to shepherd labor, and whose celebration (*Palilia* o *Parilia*) coincided with the *dies natalis Urbis Romae*. This dedication is not only important for its singularity —there are only two other examples of this cult in the Empire—, but also for its find spot. *Capilla* (Badajoz) is a place located approximately at 20 km South of *Lacinimurga* and controls an important ford on the Zújar River, used from time immemorial by flocks that spent the winter there. In the 15<sup>th</sup> century, a long and well-documented lawsuit resulting from a dispute over the control of the ford stressed *Capilla*'s main role in transhumance movements, because most of the herdsmen who crossed the river at that point come from the highlands around River Duero's sources, more than 500 kilometers away and at the other side of the Peninsula.<sup>20</sup>

If we follow a well-known ancient literary *topos*, herding was one of the true signs of barbarism. The other way round, drovers were commonly described as an

uncivilized, smelly, cruel and asocial people and often seen as brigands; that is why classical authors are seldom attracted to them except for their comic or bucolic stereotypes and for the violence or blood-shedding they caused. The concise *résumé* of a famous Spanish “herdsman”, Viriatus, speaks for itself, and obliges us to read between the lines what classical authors wrote about drovers. Livy's reports on the annual clashes between Roman troops and Lusitanian gangs depicted as rustlers and looters is a good example since a recent paper has noticed some circumstances that completely change the meaning of the incidents. First, Livy places the clashes as happening always in later fall or early spring, that is, immediately before or after winter conditions stopped all military operations. Secondly, the only year in the period free of incidents was precisely because the Roman governor felt sick. Finally, Livy attributes the success of Roman attacks to the circumstance that Lusitanians traveled hampered by the cattle they had plundered. In the light of these details, the conclusion seems obvious: far from being thieves or rustlers, Lusitanians had to be shepherds ambushed every time they came and went through the seasonal pastures. The gloomy atmosphere that Livy used to present the Spaniards' activities can be easily explained by keeping in mind that he probably reproduced the one-sided and bigoted reports provincial commanders and governors sent to Rome; on the other hand, those incidents are hardly surprising, taking into account they involved herds in a province being conquered. Should I bring forward what happened to the *conductores gregum* in peaceful and ordered Italy when the fairest of the emperors ruled? As a well-known inscription bears witness, *Saepinum*'s magistrates and *stationarii* detained some shepherds on bare suspicions of robbery, causing severe damage to the *Fiscus* and the *Praefecti Urbi*'s intervention.<sup>21</sup>

Despite the general invisibility of shepherds, Spain offers a surprising epigraphic testimony. A broken epitaph found in Santo Tomé (Barrington 27 B3) records the funerary dedication made by some *sodales oviari*. Santo Tomé lies by the mountains where the spring of the Guadalquivir (old *Baetis*) River is, a land of good pasture, visited by shepherds from the eastern part of the North Plateau (Cuenca, Guadalajara and Teruel) ever since there is historic consciousness. We could not be sure if it was the same in antiquity, but ancient inscriptions in the area often mention *sodales* honoring the memory of men at the peak of their manhood, that is to say, the kind of persons that Varro found ideal to work in the *calles* (Fig. 3).<sup>22</sup>

The existence of a *sodalitas oviarorum* could serve to explain, finally, a curious phenomenon for which different interpretations have been proposed: the tendency among the inhabitants of some Celtiberian cities —Clunia, Termes and Vxama (Barrington 25 B4), are the main ones— to migrate in huge numbers. The migration is only known through the epitaphs of people that died far from home but indicated their *origo*: of the almost 700 inscriptions of this kind known in Spain, more than a

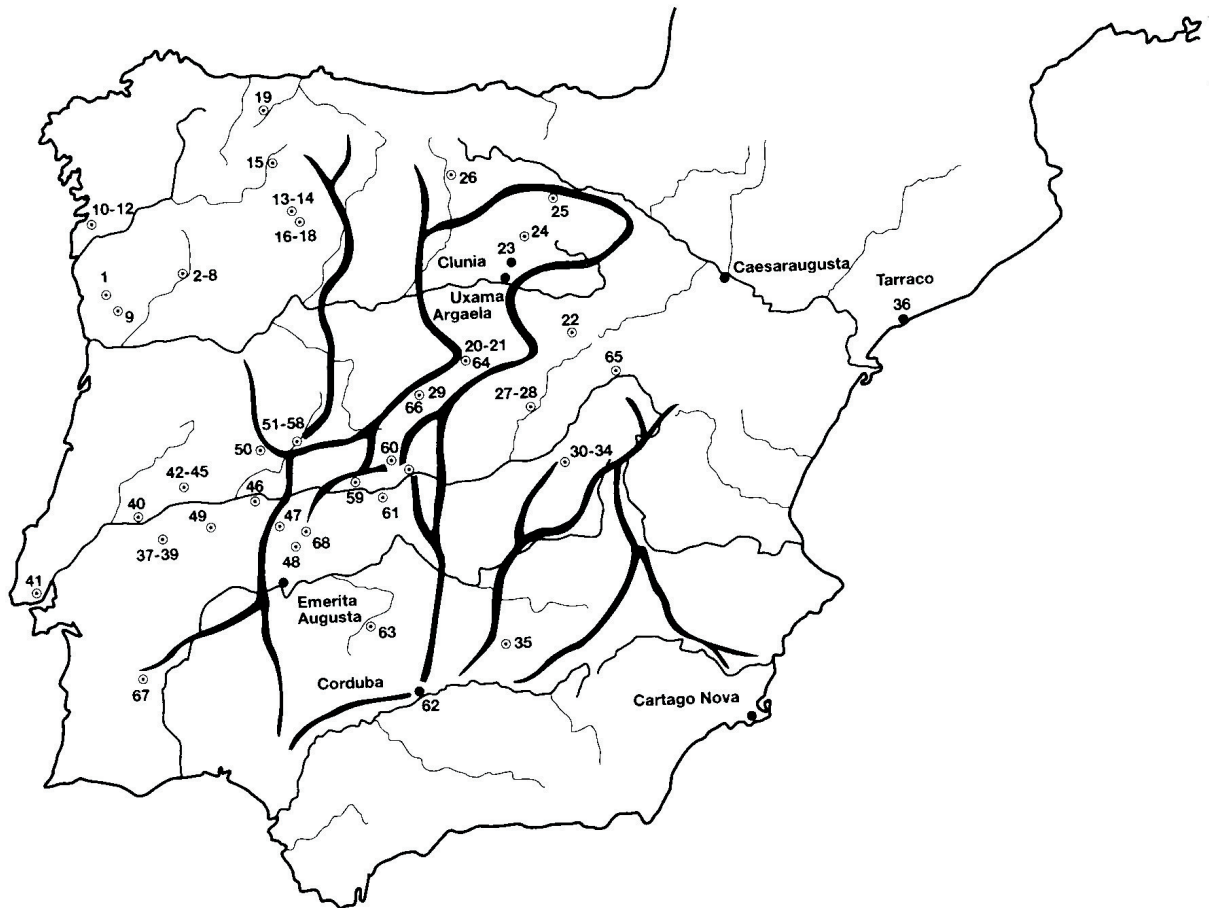


Fig. 4. Map showing distribution of Celtiberian migrants in Roman Spain. Numbers refer to individual occurrences and bold lines mark traditional *cañadas* or drovers' routes. From Gómez-Pantoja 1995, 498-499, with complete bibliography.

sixth belonged to the *oppida* mentioned above, and they duplicate those coming from any other Spanish city. Unfortunately, there is no ancient evidence on the causes for the migration but its persistence is deduced from the existence of collectivities similar to the *sodalitas* of Santo Tomé, such as the *vicinia cluniensium* testified in the Lusitanian town of Capara (Barrington 24 E4), where at least ten *clunienses'* tombstones stand. A smaller number of *uxamenses* and *termestini* accumulated in Segovia and Avila (Barrington 25 E); in Emerita Augusta, in Segobriga (Barrington 27 C2); in Ammaia and Igaeditania (Barrington 26 C2), which makes us think about other *sodalitates* (the case of Segovia) or, at least, in common *loca sepulcralia*. Those places evidence migrants' preference for the wide strip of Western Spain stretching from El Bierzo to the warm area of the Southern Plateau which contains the best grazing lands, and for places situated beside the natural routes linking those districts. The distribution of *Clunienses*, *Termestini* and *Vxamenses* who died away from home coincides by 90% with the mountains and marginal areas linked by the most traditional transhumance routes. In the West, the *cañada Vizana* goes from El Bierzo to the lands lying between the Guadiana (old *Ana*) and Guadalquivir Rivers; in Eastern Spain, the two *cañadas sorianas* link the Duero Valley with the Southern Meseta (Fig. 4).<sup>23</sup>

Grazing is a human activity especially opaque to scholars, and if we look for transhumance, the difficulties are even bigger since the economic and social singularity of this practice only appears with clarity in written documents. In the case of Roman Spain, we lack clear and early evidence of that kind and either we deal with data as those shown in this article or discuss Livy's purposes describing as *pecora consecrari* the living of Hannibal's Spanish soldiers. Hence, we should be aware that transhumance in Roman Spain is, so far, an attractive hypothesis and hope that future archaeological and epigraphic discoveries and new approaches on the study of bone remains would confirm what common sense makes us strongly suspect. Nevertheless, if the present situation appears to be unsatisfactory, let us not forget an scholar's desperation on our knowledge of ancient Italian transhumance: *senza la lex agraria epigrafica del III a.C., e senza il de re pecuaria di Varrone, cosa sapremo dell'allevamento transumante nell'Italia centro-meridionale e in Epiro?*<sup>24</sup>

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<sup>1</sup> On herding and Archaeology, see Chang, & Koster 1986; Barker 1990; and Chang & Tourtellote, 1993. The perishable condition of drovers' artifacts and dwellings (see Elias & Grande 1991, 47-68; and Blas Cortina 1995, 173-183) obliges archeologists to use special strategies, see, for instance, Beavitt, Christie & Gispert 1995, 229-244 and Creighton & Seguí, 1998, 31-52.

<sup>2</sup> For a complete description of this rich *villa* and its mosaics, see Fernández Castro 1983, 59-79.

<sup>3</sup> Spanish ancient livestock breeding from bone evidence, see Liesau & Blasco 1997, 119-147. Given Classical Archaeology's pastoral blindness (see Kehoe 1991, 386-387), scholars tend to repeat what was already said by Ancient writers, even in the case of Baetica which is by far the best documented district, see Blázquez 1978, 49-64 and Sáez 1987b, *passim*,

<sup>4</sup> In 1970, the areas unsuitable for agriculture summed up more than half of the total surface of Spain, Cabo, 1976, 151; 1998, 11-41; Perry 1997, 30-44. Climatic conditions in Central Spain around 9th century B.C seem to be not very dissimilar to actual, see Ibáñez 1997, 44-46.

<sup>5</sup> Davidson 1976, 167-173; Harrison 1993, 293-299. For Pre-historic transhumance in the Pyrenees mountains, see Gardes 2001, 304-308; in Western Spain, Galán & Ruíz-Gálvez 2001; in the Mediterranean coastal ranges, linked to Phoenician factories, Mederos & Ruiz 2000-2001, 83-96. In the Central Plateau, Jimeno & Fernández 1991 report the remains of what they described as a Bronze Age herdsman's temporary camp.

<sup>6</sup> The classical book on *Mesta's* history is Klein 1920, which needs updating. See Bishko 1982, 1-49; García Martín 1990; and Gerbet 2000.

<sup>7</sup> The oldest written reference to Italian drovers is Liv. 23.42.10 (cf. 25.10.12) from 266 B.C. On the meaning of *pecuarius*, see Botteri 1977, 313-324. For transhumance in Roman Italy, see Skydsgaard 1974, 7-36; Gabba & Pasquinucci 1979; Frayn 1984; Gabba 1985, 373-389; and 1988, 134-142. For Greece, see Georououdi 1974; Weiler 1987; Hodgkinson 1988, 35-74; Skydsgaard 1988, 75-86 and Alfaro 1995.

<sup>8</sup> Grenier 1905, 317-322; Toynbee 1965, vol. II, 286-288; Braudel 1966, 30f; Garnsey 1988, 196-209; Horden & Purcell 2001, 549-552.

<sup>9</sup> Diverse authorities quoted Cato's anecdote: Cic. *Off.* 2. 89; Plin, *NH* 18, 29-30; Columella *Rust.* 6, *praef.* 4-5; Serv. *ad. Aen.* 7. 539; Plut. *Cat. Mai.* 4.6 and 21.5. See Gómez-Pantoja 2001, 191-194 for evidence of transhumance in each of these provinces.

<sup>10</sup> Columella, *Rust.* 7.2.4: his family was certainly involved in livestock raising since one of his uncles used imported African rams to improve the quality of his flocks' wool, an experiment only justified in the case of a large stockbreeder; see Gómez-Pantoja 1996, 471-477.

<sup>11</sup> Although the attached map locates places cited in the text, references to Barrington map number and map coordinates allow a more precise placing.

<sup>12</sup> I am quoting Fita's edition (1906, 153s) but notice also Fortacin 1983.

<sup>13</sup> Valerio del Bierzo, *Replicatio*, 3 (I quote Aherne's 1940 edition).

<sup>14</sup> See Gómez-Pantoja 2001b, 197-198, with a complete bibliography.

<sup>15</sup> The pertinent chapters are 8.3.9; 4.14, 24 and 26-28; and 5.5, quoted according to the edition of *MGM Leges* I, 1, Leipzig, 1902 (K. Zeumer). On the law's purpose, see King 1981, 226, and García Moreno 1983, 423-425.

<sup>16</sup> *Lex Visigothorum* and Mesta, see Klein, 1920, 25 with precise references. The relationship between the Visigothic Code and Roman Common Law is explained by d'Ors 1960, 10-11, and cf. *callitani callibus iti ne iniuriam accipiant* in *Eph.Epigr.* 8, 1899, 139, from Sulmona. On the *Lex agraria epigraphica*, see Crawford 1996, n. 2 (esp. 116, 144, 166), and the Biferno's inscription is *CIL* IX 2826.

<sup>17</sup> Gómez-Pantoja 1995, 505; Salinas 1999, 288-292; Sánchez Moreno 2001, 392-398.

<sup>18</sup> *CIL* II 656 = *CIL* II<sup>2</sup>/7 871. For other agreement of the kind, see *CIL* III, 2328<sup>171</sup>, from Kosinj Gornij, in Slovenia, see Gómez-Pantoja 2001b, 193.

<sup>19</sup> See Plin. *NH* 9, 191 on Baetican wool. *Iptuci: AÉpigr.* 1955, 21. *Baxo: CIL* II<sup>2</sup>/7, 187. Pastor 1986, 225-227 locates *Baxo* nearby modern Loja, close to Granada; from this area comes another inscription with a grazing meaning: *CIL* II<sup>2</sup>/5, 660 = *CIL* II, 5510 and cf. Gómez-Pantoja 1994, 61-73.

<sup>20</sup> *CIL* II<sup>2</sup>/7, 851; on *Pales, RE*, XVIII (1949), 94s (P. Rohde); Capilla's toll, in Gómez-Pantoja 2001b, 203-204, with bibliography.

<sup>21</sup> Liv. *Per.* 52: *ex pastore, venator; ex venatore, latro*; cfr. Shaw, 1982-1983, 5-31; Thollard 1987, 7-19. On the clashes between Romans and Lusitanian, see Sánchez-Corriendo 1997, 69-92. *Saepinum: CIL* IX, 2438.

<sup>22</sup> *CIL* II, 3334; cfr. Varr. *Rust.* 2.10.1-3. For other inscriptions mentioning *sodales* see Gómez-Pantoja 2001b, 198-201. Modern grazing in the zone, see Rubio 1993, *passim*.

<sup>23</sup> Emigrants in Spain: Haley 1991, 87-88; *vicinia cluniensium: CIL* II, 821 and cf. Gómez-Pantoja 1999, 91-108. Migration and shepherds: Gómez-Pantoja 1995, 495-505.

<sup>24</sup> Pasquinucci 1991, 166. Logemann *et alii*, 1995, and Vega *et alii*, 1998, are two good instances of new approaches to research.

## Bibliography

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|----------------------------------|--|
| Alfaro 1995                      | C. Alfaro Giner, 'La polis y la explotación ganadera en los santuarios griegos', <i>Polis</i> , 7, 1995, 5-37.   |
| Alfaro 2001                      | C. Alfaro, 'Vías pecuarias y romanización en la Península Ibérica', en Gómez-Pantoja 2001a, 215-231.   |
| Barker 1990                      | G. Barker, 'Possiamo riconoscere la transumanza nelle testimonianze archeologiche?', in <i>Atti Giornate Internz. di Studio sulla transumanza</i> , L'Aquila, 1990, 39-51. |
| Barrington                       | <i>Barrington atlas of the Greek and Roman world</i> , ed. R. Talbert, Princeton, 2000.  |
| Beavitt, Christie & Gispert 1995 | P. Beavitt, N. Christie & J. A. Gispert, 'Serra de l'Almirant Survey Project: 1994 report', <i>Saguntum</i> , 28, 1995, 229-44.  |



- Bishko 1982 C. J. Bishko, 'Sesenta años después de la Mesta de J. Klein', *Historia, Instituciones, Documentos*, 8, 1982, 1-49.
- Blázquez 1978 J. M. Blázquez, *Economía de la Hispania romana*, Bilbao, 1978, 49-64 [= *Emerita*, 25, 1957, 159 y ss ].
- Burillo 1997 *IV Simposio sobre los Celtíberos. Economía*, ed. F. Burillo, Zaragoza, 1997.
- Cabo 1976 A. Cabo, 'Condicionamientos geográficos', in *Historia de España Alfagura*, I, ed. M. Artola, Madrid, 1976, 3-183.
- Cabo 1998 A. Cabo., 'Medio natural y trashumancia en la España peninsular', in *Mesta, trashumancia y lana en la España moderna*, eds. F. Ruiz Martín & A. García Sanz, Barcelona, 1998, 11-41.
- Creighton & Seguí 1998 O. H. Creighton & J. R. Seguí, 'The ethnoarchaeology of abandonment and post-abandonment behaviour in pastoral sites: evidence from Famorca, Alacant province, Spain', *JMA*, 11.1, 1998, 31-52.
- Chang & Koster 1986 C. Chang & H.A. Koster, 'Beyond bones: toward an archaeology of pastoralism', in ed. M.B. Schiffer, *Advances in archaeological method and theory*, vol. 9, 1986, 97-148.
- Chang & Tourtellotte 1993 C. Chang & P. A. Tourtellotte, "Ethnoarchaeological Survey of Pastoral Transhumance Sites in the Grevena Region, Greece", *JFA*, 20.3, 1993, 249-264.
- d'Ors 1960 A. d'Ors *El código de Eurico*, Roma-Madrid, 1960.
- Fernández Castro 1983 M. C. Fernández Castro, "Mosaicos de la Villa romana de Cuevas de Soria", in eds. J. M. Blázquez & T. Ortego, *Corpus de Mosaicos de España, VI, Mosaicos romanos de Soria*, Madrid, 1983, 59-79.
- Fita 1906 F. Fita, "Patrología visigótica. Elpidio, Pompeyano, Vicente y Gabino, Obispos de Huesca en el siglo VI", *Boletín de la Real Academia de la Historia*, 49, 1906, 137-169.
- Fortacín 1983 J. Fortacín, "La donación del diácono Vicente al monasterio de Asán y su posterior testamento como obispo de Huesca en el siglo VI. Precisiones críticas para el fijación del texto", *Cuadernos de Historia Jerónimo Zurita*, 47-48, 1983, 59-64.
- Frayn 1984 J. M. Frayn, *Sheep-rearing and the Wool Trade in Italy during the Roman Period*, Liverpool, 1984.
- Gabba & Pasquinucci 1979 E. Gabba & M. Pasquinucci, *Strutture agrarie e allevamento transumante nell'Italia romana (III-I sec. a.C.)*, Pisa, 1979.
- Gabba 1985 E. Gabba, 'La transhumanza nell'Italia romana. Evidenze e problemi. Qualche prospettiva per l'età altomedievale', in *L'Uomo di fronte al mondo animale nell'alto Medioevo (XXXI Settimane di Spoleto)*, Spoleto, 1985, 373-89.
- Gabba 1988 E. Gabba, 'La pastorizia nell'età tardo-imperiale in Italia', in Whittaker 1988, 134-142.
- Galán & Ruíz-Gálvez 2001 E. Galán & M. Ruíz-Gálvez, 'Rutas ganaderas, transterminancia y caminos antiguos. El caso del Occidente peninsular entre el Calcolítico y la Edad del Hierro', in Gómez-Pantoja 2001a, 263-278.
- García 1990 P. García, *La Mesta*, Madrid, 1990.
- García Moreno 1983 L. A. García Moreno, "El paisaje rural y algunos problemas ganaderos en España durante la Antigüedad tardía", *Estudios en homenaje a D. Claudio Sánchez Albornoz, vol. I*, Buenos Aires, 1983, 401-426.
- Gardes 2001 F. Gardes, 'La problématique de la transhumance protohistorique. L'exemple des Pyrénées occidentales', in Gómez-Pantoja 2001a, 279-311.
- Garnsey 1988 P. Garnsey, "Mountain Economies in Southern Europe", in Whittaker, 1988, 196-209 (= "Mountain economies in southern Europe, or thoughts on the early history, continuity and individuality of Mediterranean upland pastoralism", *Itinera*, 5-6, 1986, 7-29).
- Georgoudi 1974 S. Georgoudi, 'Quelques problèmes de la transhumance dans la Grèce ancienne', *RÉG*, 87, 1974, 155-85.
- Gerbet 2000 M. Gerbet, *Un élevage original au Moyen Âge. La péninsule Ibérique*, Biarritz, 2000.
- Gómez-Pantoja 1994 J. Gómez-Pantoja, "Occultus callis", *Mélanges de la Casa de Velázquez*, 30-1, 1994, 61-73.
- Gómez-Pantoja 1995 J. Gómez-Pantoja, "Pastores y Trashumantes de Hispania", en *Poblamiento Celtibérico (III Simposio sobre los Celtíberos, Daroca 1991)*, ed. F. Burillo, Zaragoza, 1995, 495-505.

- Gómez-Pantoja 1996 J. Gómez-Pantoja, 'Arietes ex Africa', in *L'Africa Romana XI*, eds. M. Khanoussi, P. Ruggeri & C. Vismara, Ozieri, 1996, 471-477.
- Gómez-Pantoja 1999 J. Gómez-Pantoja, "Historia de dos ciudades: Capera y Clunia", in *Économie et territoire en Lusitanie romaine (Coll. de la Casa de Velázquez, n° 65)*, eds. J. G. Gorges & F. G. Rodríguez Martín, Madrid, 1999, 91-108.
- Gómez-Pantoja 2001a *Los rebaños de Gerión. Pastores y trashumantes en Iberia Antigua y Medieval (Collection de la Casa de Velázquez, 73)*, ed. J. Gómez-Pantoja, Madrid, 2001.
- Gómez-Pantoja 2001b J. Gómez-Pantoja, 'Pastio agrestis. Pastoralismo en Hispania romana', in Gómez-Pantoja 2001a, 177-213.
- Grenier 1905 A. Grenier, 'La transhumance des troupeaux en Italie et son rôle dans l'Histoire romaine', *MÉFR*, 1905, 293-328.
- Haley 1991 E. W. Haley, *Migration and Economy in Roman Imperial Spain*, Barcelona, 1991.
- Harrison 1993 R.J., Harrison, "La intensificación económica y la integración del modo pastoril durante la Edad del Bronce", *Actas do 1º Congresso de Arqueologia peninsular (= Trabalhos de Antropologia e Etnologia*, 33, 3-4, 1993), Porto, 1993, 293-299.
- Hodkinson 1988 S. Hodkinson, 'Animal husbandry in the Greek polis', in Whittaker 1988, 35-74.
- Horden & Purcell 2000 P. Horden & N. Purcell, *The corrupting sea: a study of Mediterranean history*, Oxford, 2000.
- Ibáñez 1997 J. Ibáñez, 'Evolución de la potencialidad agrotérmica en la Celtiberia durante la Edad de Hierro', in Burillo 1997, 11-46
- Jimeno & Fernández 1991 A. Jimeno & J.J. Fernández Moreno, *Los Tolmos de Caracena (Soria). Campañas 1981 y 1982. Aportaciones al Bronce Medio de la Meseta. (Excavaciones Arqueológicas en España, 161)*, Madrid, 1991.
- Kehoe 1991 D. P. Kehoe, 'Pastoralism and Agriculture', *JRA*, 3, 1991, 386-98.
- Klein 1920 J. Klein, *The Mesta. A study of Spanish economic History 1273-1836*, Cambridge, 1920.
- Liesau & Blasco 1997 C. Liesau & M..C. Blasco, 'Ganadería y aprovechamiento animal', in Burillo 1997, 119-147.
- Logemann *et alii* 1995 E. Logemann, G. Kalkbrenner, B. Krützfeldt & W. Schüle, "Contenido de mercurio en hueso de animales domésticos y trashumancia", *Actas del I Congreso peninsular de Arqueología, vol. V (=Trabalhos de Antropologia e Etnologia*, 35 (2), 1995), Porto 1995., 457-471.
- Mederos & Ruiz 2000-2001 A. Mederos Martín & L. Ruiz Cabrero, "Transhumancia, sal y comercio fenicio en la cuenca de los ríos Vinalopó y Bajo Segura (Alicante)", *Lucentum*, 19-20, 2000-2001, 83-96.
- Pasquinucci 1991 M. Pasquinucci, "Aspetti dell'allevamento transumante nell'Italia centromeridionale fra l'età arcaica e il medioevo. Il caso della Sabina", in *Atti della Tavola rotonda Internazionale sull'Archeologia della pastorizia nell'Europa Meridionale (Chiavari, 22-24 sett. 1989)*, eds R. Maggi, R. Nisbet & G. Barker, (=RStLig, 56, 1990), Bordighera, 1991 165-177.
- Pastor 1986 M. Pastor Muñoz, *Indigenismo y romanización en la tierra de Loja*, Granada, 1986.
- Perry, 1997 A. Perry, 'Mediterranean climate', in *The Mediterranean. environment and society*, eds R. King, L. Proudfoot. & B. Smith., Londres, 1997, 30-44.
- Rubio 1993 J. L. Rubio *et alii*, *Sierra Morena Oriental (= Cuadernos de la Trashumancia, 7)*, Madrid, 1993.
- Sáez 1987a P. Sáez, 'El lugar de la ganadería en los tratados de agricultura de época romano-republicana: el *de agricultura* de M. Porcio Catón', *Ktama*, 12, 1987, 257-69.
- Sáez 1987b P. Sáez, *Agricultura romana de la Bética*, Sevilla, 1987.
- Salinas 1999 M. Salinas de Frías, "En torno a viejas cuestiones: guerra y transhumancia en la Hispania romana", in *Pueblos, lenguas y escrituras en la Hispania prerromana (Actas del VII Coloquio de Lenguas y Culturas pre-romanas de la Península Ibérica, Zaragoza 1997 = Acta Salmanticensia. Estudios Filológicos, 273)*, eds. F. Villar & F. Beltrán, Salamanca, 1999, 281-293.



- Sánchez Moreno 2001 E. Sánchez Moreno, "Cross-cultural links in ancient Iberia: Socio-economic anatomy of hospitality", *OJA*, 20(4), 2001, 391-414.
- Shaw 1982-1983 B. D. Shaw, "Eaters of Flesh, drinkers of Milk: The Ancient Mediterranean Ideology of Pastoral Nomad", *Ancient Society*, 13-14, 1982-1983, 5-31.
- Skydsgaard 1974 J. E. Skydsgaard, 'Transhumance in ancient Italy', *AnalRom*, 7, 1974, 7-36.
- Skydsgaard 1988 J. E. Skydsgaard, 'Transhumance in ancient Greece', in Whittaker 75-86.
- Thollard 1987 P. Thollard, *Barbarie et civilisation chez Strabon: étude critique des Livres III et IV de la Géographie*, Paris, 1987.
- Toynbee 1965 A. J. Toynbee, *Hannibal's Legacy*, Londres, 1965.
- Vega et alii 1998 L. G. Vega, M. L. Cerdeño & B. Córdoba, "El origen de los mastines ibéricos: la trashumancia en los pueblos prerromanos de la Meseta", *Complutum*, 9, 1998, 117-135.
- Weiler 1987 A. J. M. Weiler, 'Herders en Kudden in Griekse inscripties', *Lampas*, 20, 1987, 16-22.
- Whittaker 1988 *Pastoral Economies in Classical Antiquity (The Cambridge Philological Society, Suppl. vol. 14)*, ed. C.R. Whittaker, Cambridge, 1988.