

Bees and Covid-19: a necessary legal regulation *

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Abstract

Bees have been hovering under the radar of legal texts for centuries. In fact, they are the only animals to which continental codes dedicate specific attention and whose legal framework has remained unaltered, despite many changes that have come about in the social, economic and biological setting of our planet. The progressive disappearance of bees combined with the profound crisis caused by the coronavirus obliges the consideration of a new vision of personal and collective health in which biodiversity protection is inevitable. Pollinating insects are key for the health of the planet and the balance of ecosystems. To a great extent our diet and health maintenance rely on them. This work seeks to lay the basis for a new consideration of bees in the legal realm. The EU is aware that the relative legislation is insufficient and obsolete. More protection for bees equates to better health protection.

Key words: bees; Coronavirus; Covid-19; pollinating insects; biodiversity; biosecurity; personal health; collective health; the rights of bees; honey; the trading of honey; honeycombs; hives; swarms; products containing honey; beekeeping; labelling; bees in the CC; bees in continental law.

Resumen - *Abejas y Covid-19: una regulación jurídica necesaria*

Las abejas llevan siglos sobrevolando los textos jurídicos. De hecho, son los únicos animales a los que los Códigos continentales dedican una atención específica y cuyo régimen jurídico ha permanecido inalterado, a pesar de los muchos cambios que se han producido en el entorno social, económico y biológico de nuestro planeta. La progresiva desaparición de las abejas junto a la profunda crisis que ha provocado el coronavirus, obliga a plantearse una nueva visión de la salud personal y colectiva, en la que la protección de la biodiversidad es ineludible. Los insectos polinizadores son clave para el mantenimiento de la salud del planeta y del equilibrio de los ecosistemas. De ellos depende nuestra alimentación y el mantenimiento de la salud, en gran medida. Este trabajo, quiere sentar las bases para una nueva consideración de las abejas en el ámbito jurídico. La UE es consciente de que la legislación relativa es insuficiente y obsoleta. Más protección de las abejas, equivale a mejor protección de la salud.

Palabras clave: abejas; Coronavirus; Covid-19; insectos polinizadores; biodiversidad; bioseguridad; salud personal; salud colectiva; derecho de las abejas; miel; comercio de la miel; panales; colmenas; enjambres; productos melíferos; apicultura; etiquetaje; abejas en el CC; abejas en el derecho continental.

Summary

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1. Bees in historical sources

A first observation relates to the abundance of all types of testimonies on honey and apiculture that we find in historical sources, which is evidence of the great relevance that bees and melliferous products had in antiquity, not only for food, medicine, cosmetics and religion, but in the ancient world economy.¹ However, it is important to consider the great number of testimonies that have been lost, as the “memory archives”² only allow us to glimpse through the keyhole at the immense spectacle of social and economic activity that surrounded the world of honey and melliferous products. The task of reconstructing true history through the testimonies that accounted for daily life is forever pending, just as in this case.

The study of ordinary subjects that were not conceived of with the aim of being observed by others (public inscriptions, for example), or for publicising a regulation (municipal laws, Senate acts) are traces of dormant life, evidence of the existence of or interest in an activity, above all for the individuals taking part (the remains of containers, of receipts, of contracts, of labels, of work facilities). This evidence is decisive for the reconstruction of the economy and the social life of a community; they are the basis of the reconstruction of the specific material culture and of the functioning of a wider society, of its ways of survival, of diet, and its quality of life. Bees and honey have, in this order, had unique relevance in humanity’s history, and there remains a lot more to be done to conclusively understand the present within this context. This investigation, which now puts forward the first results, aims to indicate certain directions in which work must be continued in order to achieve better legal regulation of bees, and the agro-economic activity that, just like melliferous products, relies on them.

These days, one sees an increasingly general social awareness regarding the importance of bees for the maintenance of vital cycles and biodiversity. A retrospective look at detailed and technical legal treatment afforded by Roman jurisprudence to bees (D.41,1,5,2-3; Gai.2,68; Inst.2,1,14) is an essential approach that also serves for evaluating the importance of the legal treatment of all animals (insects included) considered in their individuality.

The health crisis we are currently enduring as a result of Covid-19 has brought to light that natural catastrophes, illnesses, climate fluctuations, and changes in taste, are indicatives that transform –occasionally radically – the material and spiritual conditions, and life in all its complexity, of a whole society.³ Indeed, today we see better than a year ago, before the pandemic, the relevance of local produce – ‘0 kilometers’ -, the importance of individual and collective health, and the need to preserve our natural environment as we know it.

Along these lines, there are two questions directly concerning bees and melliferous products: the question of property, and the regulation of the trade of honey and derived products.

1.1. Property

*This work is the starting point of a wider and more exhaustive study that requires the collaboration of a multidisciplinary team. I express my recognition of the constructive criticism and supply of materials from Gerardo Caja, Jordi Serratos, Miryam Olivera and Silvia Zanini, members of the ICALP (UAB).

¹ Vid. above all, BORTOLIN, R., *Archeologia del miele* (Mantova 2008) 188p.

² In this sense, it is useful to see the collective work coordinated by NICOLET, C. (Ed.), *La mémoire perdue. À la recherche des archives perdues publiques et privées de la Rome Antique* (1^a ed. Paris 1994; última ed. Paris 2019) DOI: 10400/books.psorbonne.25020

³ HARPER, K., *The Fate of Rome. Climate, Disease and the End of an Empire* (Princeton 2017) 512p.

The presence of bees in many Roman legal texts and other historical sources is of special interest, as the treatment awarded them conforms to a legal regime that remains practically unaltered and is reflected in the main occidental codes, even though the abundant administrative regulation, superimposed over the strictly civil,⁴ has not been able to avoid the starting point that is the question of the property of swarms and hives,⁵ which determines the very qualification of bees as wild or domesticated.

The central issue that Roman legal texts address in relation to bees is conserving of the property of migrating swarms (which relates to the legal nature of the swarm and, therefore, of the bees) and the way of acquiring said property which is related with two other principles that are central to the legal regulation of animals: the legal status of animals, until now considered as things of property,⁶ and, closely related with property, the debated question of the natural freedom of animals,⁷ which is related with the textual affirmation of the wild nature of bees (... *apium quoque natura fera est*, D.41,1,5,2 y 3).⁸

In the way it refers to property, the debated point is the *occupatio* of the swarm that, at the time of its choosing,⁹ can migrate to another estate, creating the problem of whether or not the owner of the hive conserves the ownership of this group of bees that have moved beyond the limits of the estate to which they belong.¹⁰

In this sense, the Spanish Civil Code, in the same way as the other European and Latin-American codes, is inspired by the Roman configuration of property,¹¹ according to which the most relevant things for the patrimony of an individual were the so called things related to the *mancipium* (*res Mancipi*). Among these are counted the plots of land and immovable things in Italy, slaves, and beasts of burden;¹² things that require a formal act to be acquired in a formal act, with or without the intervention of the magistrate (*mancipatio, in iure cessio, addictio*). These are distinguished from things that aren't part of the *mancipium* (*res nec Mancipi*) – those of free exchange – that can be acquired without the need of a formal act to make the act of acquiring property effective.¹³ This can be done through the so-called acts of adverse possession, among which is counted the simple offer (*traditio*), - in absolute –¹⁴ as well as occupancy, accession and specification.¹⁵ The Civil Code does not copy such distinction, but instead uses a similar distinction between moveable and immovable things, given that the ancient *mancipium* (the foundation of the distinction between things that are part of the *mancipium* and things that are not)¹⁶ had already lost relevance by the 6th century and was not incorporated into Justinian's compilation.¹⁷ Instead, at the time of the compilation, the distinction between non-moveable (or real estate) and moveable things still made sense, as visible in articles 333¹⁸ and 335¹⁹ of our current Civil Code.

So animals, apart from the basic distinction of being configured as moveable things, have passed to

⁴GARCIA GIMÉNEZ, A., La protección jurídica y administrativa de las abejas, in *Actualidad Jurídica Ambiental* 80 (2018) 2-33

⁵POLO TORIBIO, G., Abejas, enjambre, colmena: evolución histórico-jurídica a la luz del Fuero de Cuenca, *Los derechos reales: actas del II Congreso Internacional y V Iberoamericano de Derecho Romano* / coord. por Armando José Torrent Ruiz (2001) 211-231

⁶GIMÉNEZ-CANDELA, M., *Transición animal en España* (Valencia 2019) 180ss.; esp.225-262

⁷GIMÉNEZ-CANDELA, M., *Derecho Privado Romano* (Valencia 2020, 2^aed.) §§28,4,a,i y 28,4,a,ii

⁸FILIP-FROSCHL, J., *Apis natura fera est*. Romanistische Anmerkungen zur besonderen Natur der Biene, in *Scientia Iuris et Historiae, Festschrift für Peter Putzer zum 65. Geburtstag*, Verlag Kovar, Eglinga.d.Paar, I (2004) 141-173

⁹GARCIA GIMÉNEZ, A., La protección jurídica y administrativa de las abejas, in *Actualidad Jurídica Ambiental* 80 (2018) 2-33

¹⁰MANTOVANI, D., I giuristi, il retore e le api. *Ius controversum e natura nella Declamatio maior XIII*, in *Seminarios Complutenses de Derecho Romano y tradición romanística*, 19 (2006) 205-283

¹¹AA.VV., *La Codificazione del Diritto dall'antico al moderno* (Napoli 1998); KASER, M., KNÜTEL, R., *Römisches Privatrecht* (18. Auflage, München 2005).

¹²Gai.2,14a: "(...) *et ea animalia quae collo dorsove domari solent, velut boves equi, muli, asini...*" (=such as animals that are tamed by the neck or by the back, such as oxen, horses, mules, donkeys)

¹³Gai.2,19: "*Nam res nec Mancipi ipsa traditione pleno iure alterius fiunt, si modo corporales sunt et ob id recipiunt traditionem*" (=Essentially, the *res nec Mancipi* become under the full ownership of another by simple offer, as long as they are corporeal and therefore capable of being offered)

¹⁴Above all, WACKE, A., *Das Besitzkonstitut als Übergabesurrogat in Rechtsgeschichte und Rechtsdogmatik. Ursprung, Entwicklung und Grenzen des Traditionsprinzips im Mobiliarsachenrecht* (Köln 1974)

¹⁵SEO, E., *Der rechtsgeschäftliche Erwerb von Eigentum an beweglichen Sachen im Römischen Recht und in der römisch-rechtlichen Tradition* (Münster 2004).

¹⁶Among others, BRETONE, M., *I fondamenti del Diritto Romano: le cose e la natura* (Roma-Bari 1998); DAUBERMANN, *Die Sachgesamtheit als Gegenstand des klassischen römischen Rechts: vornehmlich unter dem Blickwinkel von Veränderungen in ihrer Zusammensetzung* (Bern 1993)

¹⁷As there is a relatively extensive literature, it is enough to refer to an excellent exposition on the transformations of property up until its inclusion in contemporary codes (especially in the German BGB, with a select biography on the matter) offered in WESENER, G., WESENER, G., *Historia del Derecho Privado Moderno en Alemania y en Europa*, trad. de la 4^a ed. alemana (Wien-Köln-Graz 1985) por DE LOS MOZOS TOUYA, J.J. (Valladolid 1998) p.80ss., 198ss., 233ss., 296ss.

¹⁸Art. 333 Cc.: "Todas las cosas que son o pueden ser objeto de apropiación se consideran como bienes muebles o inmuebles".

¹⁹Art. 335 Cc.: "Se reputan bienes muebles los susceptibles de apropiación no comprendidos en el capítulo anterior, y en general, todos los que se pueden transportar de un punto a otro sin menoscabo de la cosa inmueble a la que estuvieren unidos".

contemporary legislation differentiated between those that serve man by working the land and for transport, and those that serve as food (that is to say, all the rest, including bees and game species).²⁰

It is continuously highlighted that the ideological substrate of such a conception is anthropocentric and economic.^{21 22}

Otherwise, the starting point for the legal configuration of property is the great division of things made by Roman jurisprudence, for which a jurist from the Hadrian age named Gaius was above all responsible for transmitting to future generations.²³ In this sense, the Gaian classification of things that can be an object of personal appropriation must be distinguished from those that cannot form part of an individual's patrimony,²⁴ due to serving the interests of the community, being dedicated to the gods, or belonging to the Roman people - a concept of property in which the value of things is measured by their utility, for the benefits they provide to man, from the point of view of what was clearly an eminently agrarian society.²⁵

It is convenient, however, to make observations that nuance the attribution to Roman law of the consequences that come from the Roman qualification of animals as things. A first point that must be taken into account is that the version of animals as things of property that man can hypothetically use and abuse is not strictly a notion that can be attributed to Roman law. Rather, what is clear in relation to animals, following an approach towards the classical sources too meticulous to set out here, is that Roman law, as a foundation of European civil law, maintains respect towards nature, towards living beings, and especially towards animals: a profoundly respectful attitude.²⁶

A second observation, which partially influences that which has already been formulated, is that the use and abuse as prerogatives of property that authorise the owner the "right of enjoying and disposing of things in the most absolute manner", as appears in art. 544 of the Napoleonic Code,²⁷ has been the object of multiple nuances, as it has been observed,²⁸ becoming a debilitated and also fragmented law, as the majority of the civil doctrine accepts.

A third point that must be made regarding the affirmation of the inclusion of animals as things within the Roman legal system (and, as a result, in continental legal systems) is it at least presents the advantage that, in this way, animals come to be recognised as a legal reality, "a first step towards entering the zone of protection by law", which consequently would have protected animals from third party harm (through the *lex Aquilia de damno*), for example. Another advantage is that a legal reality could always experience variations, improvements, changes and suppressions. This reasoning has been the object of discussion, above all by those who attribute all the bad that has happened to animals to their inclusion as things in the Roman legal system.

The receipt of such distinctive traces of Roman property and, as a consequence, the conception of animals as things, did not suffer (as it has been said) great variations in the codification process. Indeed, the great parameters of the legal configuration of animals in our Civil Code are contained in articles 465 and 610. Article 465 sets out what can be denominated general rules, and article 610 details appropriation as a form of acquiring things (and, therefore, of animals) that do not have an owner (*res nullius*).

The fact that the French Civil Code ignored scientific advances on the nature of animals that had already come about by that time, and the philosophical reflection tending to consider animals as integral elements of a nature that deserves respect (just like the schools of thought that accentuated the capacity of animals to feel,²⁹ but that in codification persisted with affirmation of animals as things equatable to any moveable thing)

²⁰ At the time when civil law was codified, animals used for experimentation, for fur, for public shows and entertainment or for farming were (evidently) not considered.

²¹ Above all, CORNIL, G., *Traité de la possession dans le droit romain: pour servir de base a une étude comparative des législations modernes* (Paris 1905); CAPOGROSSI COLOGNESI, L., *La terra in Roma antica: forme di proprietà e rapporti produttivi* (Roma 1981); id., *Proprietà e diritti reali: usi e tutela della proprietà fondiaria nel diritto romano* (Roma 1999); BÖHR, R., *Das Verbot der eigenmächtigen Besitzumwandlung im römischen Privatrecht: ein Beitrag zur rechtshistorischen Spruchregelforschung* (Köln 2002).

²² Cf. LANATA, G., *Antropocentrismo e cosmocentrismo nel pensiero antico*, in CASTIGNONE, S., LANATA, G. (ed.), *Filosofie e animali nel mondo antico* (Pisa 1994) 35

²³ Of the many editions of *The Institutes of Gaius*, above all see. MANTHE, U., *Gaius. Institutiones. Herausgegeben, Übersetzung und Kommentar* (Darmstadt 2004).

²⁴ Gai. 4,1: "(...) modo videamus de rebus; quae vel in nostro patrimonio sunt vel extra nostrum patrimonium habentur"; ..Gai.2,4: *..sacrae sunt quae diis superis consecratae sunt; religiosae quae diis Manibus relictiae sunt*

²⁵ RATHBONE, D., *Rural Economy and Society in Roman Italy* (Cambridge University Press 2004); REMESAL RODRÍGUEZ, J., *Heeresversorgung im frühen Prinzipat. Eine Art, die antike Wirtschaft zu verstehen*. (Münster 2002); SCHEIDEL, W., von REDEN, S. (ed.) *The Ancient Economy* (Princeton 2002); FINLEY, M.I., *Ancient Economy* (California University Press 1999); DUNCAN-JONES, R., *Structure & Scale in the Roman Economy* (Cambridge University Press 1990); WEBER, M., *Wirtschaft und Gesellschaft: Grundriß der verstehende Soziologie/Max Weber; besorgt von Johannes Winckelmann* (Tübingen 1985)

²⁶ Vid. SÆLID GILHUS, I., *Animals, Gods and Humans* (London-New York 2006)

²⁷ Code civil, art. 544: "La propriété est le droit de jouir et de disposer des choses de la manière la plus absolue pourvu qu'on en fasse pas un usage prohibé par les lois ou par les règlements".

²⁸ RODOTA, S., *El Derecho terrible* (Madrid 1986)

²⁹ BENTHAM, J., (London, 1748-1832), considered the first defender of Animal Welfare, in his work, *An Introduction to the*

had a direct and undeniable influence on the rest of European and Latin-American codifications.³⁰

Article 465 of the Civil Code is written as follows:

“Wild animals are only possessed while they are under one’s control; those domesticated or tamed are considered as tame or domestic so long as they retain the habit of returning to the home of their possessor”.

The comparison of animals with things comes as much from the composition of the articles as from their systematic placement.³¹

The adoption of the roman criterion *animus revertendi*, applied to domestic and tame animals, continued to surprise in the middle of the 19th century. Regarding the primitive sense of the expression *animus revertendi* it is useful to bear in mind that Roman jurists employed the term as a reference for checking whether *potestas* – real and current control - was had over an animal. It is strange to think that hens, over which there was no unanimity on whether or not they had *animus revertendi*,³² gave rise to animated polemic among Roman jurists establishing whether their nature was wild or domestic.³³ Something similar can be said of the nature of bees once the swarm has migrated.

The term possession is employed here in the sense of physical possession (*possessio naturalis*) to distinguish it from civil possession (*possessio civilis*) or possession as if one were the owner. Without delving into the historical development of both concepts here, it is worth stating that in our Civil Code this Roman distinction is brought together from article 430 onwards, affording the owner, or physical possessor of the thing, the powers inherent in possession, which are use, enjoyment and disposition. This includes the owner’s authority to use his power absolutely over what is his, with no limitations other than those determined by the law;³⁴ power, thus, to alienate, to tax, to consume, to abandon, to destroy or, ultimately, to treat as the owner deems appropriate, without, in principle planning for the occurrence of any possible abuse.

Related to this, article 610 of the Civil Code³⁵ is set out as follows:

“Property capable of appropriation without an owner, such as game or wild fish, hidden treasure and abandoned moveable things, are acquired by occupancy”³⁶

The aforementioned article heads the Civil Code, and is aimed at regulating the acquisition of property through occupancy,³⁷ which is considered the normal way of becoming an owner, based on the composition of article 609.³⁸ It is clear that such a composition is related to the well-known scholastic distinction between

Principles of Morals and Legislation, published in London in 1789 (the year in which the French Revolution broke out) and whose latest English edition came out in 2005 (Adamant Media Corporation), reasoned in the following way: that the capacity for animals to suffer, more than their capacity to talk or reason, was what main them worthy of consideration and respect: “What else is it that should trace the insuperable line? Is it the faculty of reason or perhaps the faculty of discourse? But a full-grown horse or dog is beyond comparison a more rational, as well as more conversable animal, than an infant of a day or a week or even a month old. But suppose they were otherwise, what would it avail? The question is not, Can they reason?, nor Can they talk? but, Can they suffer? Why should the law refuse its protection to any sensitive being? The time will come when humanity will extend its mantle over everything which breathes”.

³⁰ The Austrian and German Civil Codes have excluded animals from the concept of things, as we will have the chance to see; vid. infra, sub 2

³¹ Civil Code article 465 Cc. closes Chapter III (the effects of possession) of Title V on possession, located within book II: on goods, property and amendments.

³² Cf. Inst. 2,1,16; also, Inst. 2,1,14 y 15, on the – wild or otherwise – nature of bees, turkeys and pigeons. In relation to *animus revertendi*, see above all FILIP-FROSCHL, J., *Cervi, qui in silvas ire et redire solent*. Anmerkungen zu einem *exemplum iuris*, in *Iurisprudentia universalis*. Festschrift für Theo Mayer-Maly zum 70. Geburtstag, Hrsg. v. M. J. Schermaier (Köln, Weimar, Wien, Böhlau 2002) 191- 213

³³ The treaties on animals have since constituted the scientific approach towards their nature, par excellence. A mix of fantasy and imagination, with unverifiable data, these treaties nourished the imagination and the vision of animals until well into the 19th century. Cf. CAMASSA, G., *Frammenti del bestiario pitagorico nella riflessione di Porfirio*, in CASTIGNONE, S., LANATA, G (ed.), *Filosofia e animali nel mondo antico* (cit.) 92 ss.

³⁴ Art. 348 Cc.: “La propiedad es el derecho de gozar y disponer de una cosa, sin mas limitaciones que las establecidas en las leyes”; que reproduce a la letra el Code civil francés art. 544 : “La propriété est le droit de jouir et de disposer des choses de la manière la plus absolue pourvu qu’on en fasse pas un usage prohibé par les lois ou par les règlements”.

³⁵ Our text is directly inspired by art 2279 of the French Civil Code: “En fait de meubles, la possession vaut titre. Néanmoins, celui qui a perdu ou auquel il a été volé une chose peut la revendiquer pendant trois ans à compter du jour de la perte ou du vol, contre celui dans les mains duquel il la trouve ; sauf à celui-ci son recours contre celui duquel il la tient”. Cfr. DROSS, W., *Le singulier destin de l’article 2279 du Code civil*, *Revue trimestrielle de Droit civil*, 1 (2006) 27ss.

³⁶ Translation found at <https://www.refworld.org/cgi-bin/texis/vtx/rwmain/opendocpdf.pdf?reldoc=y&docid=5a8ad42e4>

³⁷ Cc. Libro III: “De los diferentes modos de adquirir la propiedad”; Título I: “De la ocupación”.

³⁸ Art. 609 Cc.: “La propiedad se adquiere por la ocupación” Así reza el primer párrafo, sin matices. A continuación discurre en su segundo párrafo el articulado: “La propiedad y los demás derechos sobre los bienes se adquieren y transmiten por la ley, por donación,

original and derivative acquisition of property, which despite its imprecision is always considered the vertex on which the complex question of property acquisition depends. Essentially, occupancy (*occupatio*) is the act by which the acquirer, without mediation of any other, or the dependency on any prior act, appropriates a thing by making it their own,³⁹ which constituting a direct and primary act of taking possession of something. In this sense, following the tradition of Roman jurisprudence, which accurately exemplifies such cases, our Code considers appropriable through *occupatio* things that do not have an owner (*res nullius*), be it permanently (animals that can be hunted and fished, as well as bees when they seasonally migrate) or temporarily (hidden treasure and abandoned things).⁴⁰

The theory of occupancy and the relevance attributed to it by the Code is perhaps nowadays difficult to justify. However, it is worth remembering that at the moment of codification the text was perfectly coherent with the type of society it aimed to regulate, not much different than the actual Roman society that inspired the construction of this dogmatic category, based on the large amount of cases during its development. Otherwise, it is interesting to remember that the Roman jurisprudential texts relating to occupancy were of decisive importance for the great jurists of the 17th century, as they saw in them a way of justifying the acquisition of territory conquered in the period of the great discoveries and expeditions to the New World. For the discoverers and for the Kingdoms that financed the journeys, those new territories were also *res nullius* - things lacking an owner.

The insertion of animals (and in our case, bees) into this theory of occupancy as things resembling discovered objects is no more than a logical extension of the legal system that accepts them and of the status attributed to them. Coherently (and even though they can stand out as nuances of the treatment) the brood of animals are considered fruits of the producer and, for this reason, become the property of the owner of the original thing by accession.⁴¹ This is the meaning of article 355, paragraph 1, of our Civil Code, aimed at specifying what are considered natural fruits:

“Natural fruits are the spontaneous produce of the land, and the brood and other products of animals”⁴²

The (probably necessary) simplification of the Civil Code places an egg on the same level as a piglet, except when referring to the moment of acquisition. As it is known, fruits are acquired by simple separation, which does not regulate the brood of animals considered the owner’s even before birth, as set out in the second paragraph of Civil Code article 357.⁴³

The same perspective can be seen in Civil Code article 499⁴⁴ relating to the usufruct over sheep or a herd of cattle, in which the requirement to conserve “their form and substance” (a transcription of the principle *salva rerum substantia* that gave Roman jurists so many opportunities for casuistry) is met by the obligation to replace the cattle that die during the year from illness or from predators with brood.

1.2. The trade in honey and derived products

From the evidence of many literary (Verg. *Georg.* 4, 256; Plin. *NH* 11,20; Colum. 9,7,5), epigraphical (CIL. I, 1409,4; IV, 1992; 5740 y 42; 9421; 10288) and papyrological (PSI 428,86-88; P. Lond. 2141, 19-23) sources, it is well known that the trade in honey and products deriving from it is a key aspect of understanding the economy of the ancient world. However, honey and melliferous products have not received the attention of investigators in the same way as other foods and traded products from antiquity have, such as wine or oil. In contrast to these, honey is harder to trace, so the archaeological remains are not as abundant and, given their typical and fragile nature, have disappeared more readily.

Despite the lacunas and absence of testimony we are faced with, the study of this question is crucial

por sucesión testada e intestada, y por consecuencia de ciertos contratos mediante la tradición”.

³⁹ Cic. *De offic.* I, 7

⁴⁰ Cf. Above all, with comparative literature, KNÜTEL, R., *Der Wettlauf der Okkupanten, Usus Modernus pandectarum. Römisches Recht, Deutsches Recht und Naturrecht in der frühen Neuzeit.* Klaus Luig zum 70. Geburtstag (Köln, Weimar, Wien 2007) 75ss.

⁴¹ Art. 353 Cc.: “La propiedad de los bienes da derecho por accesión a todo lo que ellos producen, o se les une o incorpora, natural o artificialmente”. Art. 354 Cc.: “Pertenece al propietario: 1º los frutos naturales. 2º los frutos industriales. 3º los frutos civiles”.

⁴² Translation found at <https://www.refworld.org/cgi-bin/texis/vtx/rwmain/opendocpdf.pdf?reldoc=y&docid=5a8ad42e4>

⁴³ Art. 357 Cc.: “No se reputan frutos naturales o industriales, sino los que están manifiestos o nacidos. Respecto a los animales, basta que estén en el vientre de su madre, aunque no hayan nacido”.

⁴⁴ Art. 499 Cc.: “Si el usufructo se constituyere sobre un rebaño o piara de ganados, el usufructuario estará obligado a reemplazar con las crías las cabezas que mueran anual y ordinariamente, o falten por la rapacidad de animales dañinos. Si el ganado en que se constituyere el usufructo pereciere del todo, sin culpa del usufructuario, por efecto de un contagio u otro acontecimiento no común, el usufructuario cumplirá con entregar al dueño los despojos que se hubieren salvado de esta desgracia. Si el rebaño pereciere en parte, también por un accidente, y sin culpa del usufructuario, continuará el usufructo en la parte que se conserve. Si el usufructo fuere de ganado estéril, se considerará, en cuanto sus efectos, como si se hubiese constituido sobre cosa fungible”.

enough to deserve a review of the available sources from a wide and multidisciplinary perspective that we currently lack, even though passionate studies have been made by entomologists and beekeepers since the 18th century.⁴⁵ In recent decades interest has not decreased, but increased, and above all among historians.⁴⁶

Honey was transported in containers that, as with other products for consumption, were labelled for identification (*tituli, picti, graphiti*), from which interesting conclusions can be drawn regarding ways of feeding and especially of trade, as honey, along with wine, oil and cereals, was considered a primary food. The news taken from Pliny (NH 11,8,18) and above all from Strabo (Str.3,2,6) places the Baetica as one of the main exporters of honey as early as the Augustan age.

Within the EU, honey currently represents an activity in which 600,000 beekeepers participate with 18 million hives that produce 250,000 tones of honey annually, which is clearly insufficient for meeting the demand of EU consumers, who require a further 200,000 tonnes to be imported. This situation reflects 56% self-sufficiency, which, although initially favourable for beekeepers, has suffered a clear deterioration of the market due to products being mislabelled, thus confusing the consumer.

The EU has addressed the situation in two successive Directives,⁴⁷ trying to deal with the question of the botanic origin of the honey (floral, vegetable) and the certificate of origin, as the multitude of nations' internal regulations is far from assuring consumers clear, transparent and complete information.

2. Bees in continental codes

The current legal configuration of bees (as of a nature that corresponds to that of wild animals) appears in a limited form in the main continental codes that follow the French model, derived from the Roman tradition.⁴⁸ The main consequence of the consideration of bees belonging to wild fauna is that it continues to present difficulties for their effective protection as individuals, and aside from this they do not appear within the range of protection for domestic animals, which is characterised as being a regulation that is both abundant and extremely detailed and meticulous.⁴⁹

Considering a possible extension to bees of the protection afforded to, say, dairy cows, which (as with other production animals) are considered sentient beings by article 13 of the TFEU would right now clash with great doctrinal obstacles. It was only recently that fish and cephalopods were incorporated into the protectionist realm of sentient beings, and for many it continues to be a shocking and hard to implement affirmation that aquatic fauna experience pain or pleasure beyond their recognised sensorial capacities.⁵⁰ Well lets think for a moment about how science will affirm that bees are also sentient beings; for this reason, as a parameter of treatment the welfare regulations that govern other domestically classed animals should be made more extensive. It is clear that it is not about classifications, but about affording all living beings an effective level of protection.

This genuine legal lacuna in the treatment of bees has never caught the attention of jurists, to the point that they started disappearing from our surroundings at an alarming rate. For this reason alone, it is worth reconsidering the effective protection of bees, making it different to the existing one, as well as better management of beekeeping and of melliferous products, over which confusion prevails. As a future goal for legislators, the protection-management tandem of bees should be inseparable.

In our Civil Code this treatment appears in article 612,⁵¹ where the beekeeper is attributed property of the hive that migrates following a new queen, and is granted the authority of maintaining the property, if pursuit of it begins interruptedly and without delay. Therefore, it is an exact reproduction of the Roman regulation, which nowadays astonishes with its picturesqueness and lack of practical reasoning. Aside from this, beekeeper activity is regulated by Royal Decree 209/2002, of 22nd February, by which rules of management of bee farms are established.⁵²

An identical situation relating to bees is found other civil codes around us, not to mention in the civil

⁴⁵RAY, P.A.P., *Mémoire sur l'histoire des abeilles*, in *Journal de physique*, 24 (1784) 117-129

⁴⁶FERNÁNDEZ URIEL, P., *Dones del cielo: abeja y miel en el Mediterráneo antiguo* (Madrid 2011)

⁴⁷Directive 2014/63 of the European Parliament and of the Council of 15 May 2014 amending Council Directive 2001/110/EC relating to honey. <https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:32014L0063>

⁴⁸FERNÁNDEZ DOMINGO, J.I., *Las abejas y el Derecho* (Madrid 2018) 192p.

⁴⁹BROOM, D.M., *Animal Welfare in the European Union* (2017) <https://www.europarl.europa.eu/supporting-analyses>; PETERS, A., *Animals in International Law* (Leiden-Boston 2020) 236ss.

⁵⁰GIMÉNEZ-CANDELA, M., SARAIVA, J.L., BAUER, H., *The legal protection of farmed fish in Europe – analysing the range of EU legislation and the impact of international animal welfare standards for the fishes in European aquaculture*, dA. *Derecho Animal* (Forum of Animal Law Studies) 11/1 (2020). DOI <https://doi.org/10.5565/rev/da.460>

⁵¹Cc. art 612: “El propietario de un enjambre de abejas tendrá derecho a perseguirlo sobre el fundo ajeno, indemnizando al poseedor de éste el daño causado. Si estuviere cercado, necesitará el consentimiento del dueño para penetrar en él.” // “Cuando el propietario no haya perseguido, o cese de perseguir el enjambre dos días consecutivos, podrá el poseedor de la finca ocuparlo o retenerlo.”

⁵²BOE 62, de 13 de marzo de 2002 <https://www.boe.es/eli/es/rd/2002/02/22/209>

codes in Latin America. Among others, I am referring to the Italian Codice Civile,⁵³ to the French Code Rural,⁵⁴ to the Swiss ZGB,⁵⁵ and to the German BGB.⁵⁶

3. Bees and biodiversity

The biodiversity of insects is being threatened throughout the world. In 2019 an extensive analysis on the decrease of insects across the world was published, as well as a systematic evaluation of the factors underlying this alarming phenomenon.⁵⁷ The aforementioned study, from which some of the statistics and considerations reflected here have been extracted, reveals important measurements of the reduction of insect populations, and it affirms that such rates could lead to the extinction of 40% of insect species across the world in the following decades.

In terrestrial ecosystems, Lepidoptera, Hymenoptera (bees, wasps, bumblebees) and Coleoptera (dung beetles) seem to be the most affected taxonomic groups. The affected groups of insects do not only include specific niche species, but also many common and general species. At the same time, there is an increasing abundance of a small number of species unknown to traditional classification; adaptable and common species that are filling niches left empty by those that are diminishing.

The main causes diminishing the aforementioned species seem to be the following factors, set out here in order of importance:

- a) habitat loss and the implementation of intensive agriculture and urbanisation
- b) pollution, mainly that caused by pesticides and synthetic fertilisers
- c) biological factors, including pathogens and introduced species
- d) climate change. This last factor is especially important in tropical regions, but only affects a minority of species in colder climates and mild, mountainous areas.

The concern for the bee situation within the scientific realm is evidenced by the increasing number of publications that have appeared precisely in 2020.⁵⁸ The common nexus between the majority of publications is the highlighting of the lack of specific actions, both on state and global levels,⁵⁹ to stop the growing disappearance of bees; not knowing how to deal with the cohabitation of species by normal means, and; the effects of Covid-19 and other infectious illnesses, in conformity with the “One Health” principle, which aims to study fundamental epidemiological questions.⁶⁰ Given that both wild and managed bees are essential pollinators of crops and wild flowers, their health has a direct impact on human and environmental health and, through them, questions related to ecological immunology can be addressed with a better approach towards the effect on the health of pollinators.

The European Parliament has expressly defined the beekeeping sector as “essential” for the EU, as it makes an important contribution to society, as much economically (14.2 million euros annually) as environmentally, and maintaining ecological balance and biodiversity, as that 84% of plant species and 76% of food production in Europe depends on entomophilous pollination (European Parliament, 2019).⁶¹

Moreover, in recent years public awareness of the reduction of pollinating insect populations has

⁵³Cc.it. art. 924: “Il proprietario di sciami di api ha diritto di inseguirli sul fondo altrui: ma deve indennità per il danno cagionato al fondo; se non li ha inseguiti entro due giorni o ha cessato durante due giorni di inseguirli, può prenderli e ritenerli il proprietario del fondo.”

⁵⁴Code Rural. Art. L. 211-9: “Le propriétaire d'un essaim a le droit de le réclamer et de s'en ressaisir, tant qu'il n'a pas cessé de le suivre; autrement l'essaim appartient au propriétaire du terrain sur lequel il s'est fixé.”

⁵⁵ZGB 719.3: “Bienenschwärme werden dadurch, dass sie auf fremden Boden gelangen, nicht herrenlos.”

⁵⁶BGB §961: “Zieht ein Bienenschwarm aus, so wird er herrenlos, wenn nicht der Eigentümer ihn unverzüglich verfolgt oder wenn der Eigentümer die Verfolgung aufgibt.”

⁵⁷ SANCHEZ-BAYO, F., WYCKHUIS, K., A.G., Worlwide decline of the entomofauna. A Review of its drivers, in *Biological Conservation*, 232 (2019) 8-27. DOI: <https://doi.org/10.1016/j.biocon.2019.01.020>

⁵⁸Between January 2019 and December 2020 over 100 scientific articles related to bees were published, which can be confirmed in the Science Direct database, www.sciencedirect.com

⁵⁹ ORR, M.C., HUGUES, A.C., CHESTERS, D., PICKERING, J., DONGZU, C., ASCHE, J.S., Global Patterns and Drivers of Bee Distribution, in *Current Biology* 31 (2020) 1-8. DOI: <https://doi.org/10.1016/j.cub.2020.10.053>

⁶⁰ WILFERT, L., BROWN, M.J.F., DOUBLET, V., One Health implications of infectious diseases of wild and managed bees, en *Journal of Invertebrate Pathology* (2020) DOI: <https://doi.org/10.1016/j.jip.2020.107506> ; PUMAROLA I BATLLE, M., Enfermedad Animal, zoonosis y “One Health”: lo que hemos aprendido los veterinarios a lo largo de la historia, in *DA.Derecho Animal* 11/4 (2020). DOI: <https://doi.org/10.5565/rev/da.520>

⁶¹ News from the European Parliament: What's behind the decline in bees and other pollinators? <https://www.europarl.europa.eu/news/en/headlines/society/20191129STO67758/what-s-behind-the-decline-in-bees-and-other-pollinators-infographic>

increased in such a way that, in 2019, European citizens began an initiative⁶² to protect bees, requesting that the Commission eliminate the use of pesticides in EU agriculture in order to conserve and re-establish insect populations, and increase support for farmers for the transition towards more sustainable agronomic practices.

At state level, Spain is not only one of the European countries with the highest number of bee species, but it is also the second largest producer of honey from domestic bees (*Apis mellifera*) in Europe, after Romania. Furthermore, it is clear that apiculture and agriculture related with crops that depend on pollination are key sectors for the Spanish economy, which is why Spain runs the risk of being one of the countries that suffers most intensely as a result of the alarming decline in pollinating insects.⁶³

In short, a reconsideration of current agricultural practices is urgently needed, and in particular an important reduction in the use of pesticides and their replacement with more sustainable and ecologically based practices, in order to stop and reverse current trends, to allow the restoration of declining insect populations, and to safeguard vital services that aid ecosystems.

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⁶²The “Save the Bees and Farmers!” European Citizens’ Initiative towards a bee-friendly agriculture for a healthy environment” (30th September 2019)

⁶³It is also worth taking into account the appearance of the Asiatic wasp (*Vespa velutina*), an invasive allochthonous species that threatens the survival of bees and advances unstoppably, spreading through vast parts of the country, especially in Galicia, Green Spain and Catalonia.

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