Riddle, John (2010)
Goddesses, elixirs, and witches: plants and sexuality throughout human history
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The central argument of this book is that pomegranates, mandrakes, artemisia (including mugwort, absinthe and southernwood) and the 'chaste tree' were used as fertility regulators throughout (mostly) Western history; successive chapters focus on each plant. The book will be seized upon by those looking for evidence that women in the past were in control of their fertility, but it should be read with a serious health warning. Flagged up in the 'puffs' on the back cover as 'both a valued reference and a page turner', I do not consider that it is either.

The main themes repeat and develop those of Riddle's previous books on the topic. As in *Contraception and abortion from the ancient world to the Renaissance* (Harvard University Press, 1992), he argues that 'the ancients discovered what we only recently rediscovered' (p. 87). In the present book, for example, the chapter on artemisia discusses artemisinin as a modern malaria treatment, and Riddle tries to argue that the Greeks and Romans knew about mosquito bites causing the disease 'implicitly', and that the use of artemisia for 'fevers' meant it was used for malaria too; he therefore summarises, 'Ancient peoples used a drug to treat malaria; we are just returning to it and call it a wonder drug' (p. 89). As in *Eve's herbs* (Harvard University Press, 1997), he asserts that female knowledge of fertility-regulating plants was suppressed over time but, while that book looked mostly at the period from the Middle Ages to the present day, here his central focus is on the records of the earliest human societies.

In order to produce the historical continuity his argument needs, Riddle plays fast and loose with his sources. A good example of this occurs when he discusses a coin from Selinus, c. 467 BC, which shows a figure holding 'a sprig of celery (the city symbol) but it could easily be artemisia' (p. 91). That 'could easily be' is very significant; the tiny image could be a wide range of plants, but for Riddle it is artemisia. Another typical moment is when he suggests that the practice of anointing oneself with marigold flowers, marjoram, thyme, and wormwood on St Luke's day and reciting 'St Luke, St Luke, Be kind to me, In dreams let me my true-love see' – which is usually understood as a charm to see the image of the man one will marry – is in fact 'a poetic expression for preserving health from mosquito bites so that the person could live to dream of his [sic] beloved'. Only if you are trying to show that wormwood was the wonder drug of its day… Riddle wants the huluppu tree, from which the goddess Inanna derived her power, to be the pomegranate – despite there being a different term for this fruit in Assyrian sources – in order that, on the Uruk vase (dated by Riddle at c. 3100 BC), the grain can represent fertility and the (alleged) pomegranate its control. Riddle, not surprisingly, agrees with the (widespread) argument that Eve's apple, too, was a pomegranate, even though in Neoassyrian sources the pomegranate is the tree of life, not the tree of knowledge. Eve's sin thus becomes 'contraception and reproductive power' (p. 39). As in *Contraception and abortion* (p. 26), Riddle argues that when, in Greek myth, Persephone eats pomegranate seeds after her abduction by the god of the underworld, these are intended to act as a contraceptive.

Why pomegranates, the plant with which the book opens? Because, Riddle argues, there is modern evidence that they worked. But this evidence is not as impressive as he makes it sound. I pointed out in my book *Hippocrates' woman* (Routledge, 1998, pp. 148-9) that the

medical research Riddle used in 1992 was not straightforward; he cited, and still cites, studies using rats or guinea pigs, but does not tell the reader that statements such as 'Pomegranates fed to guinea pigs resulted in a 100 percent prevention of pregnancy' (p. 18; cf. 1992: 25-6) are based on tiny samples (25 pairs of rats, four pairs of guinea pigs, in Gujral et al.'s 1960 study used here). But, as I noted, and as Riddle himself realizes, the modern studies also show that the seed has no effect at all, only 'the fruit skin around the seed' being efficacious (Riddle, *Goddesses, elixirs, and witches*, p. 18). Rind/peel works, seeds don't: so what happens to Persephone and her seeds? In *Eve's herbs* (p. 43) Riddle tried to merge the two and suggest that the ancient sources' 'term for seed would include what we identify as pulp or seed covering'. This did not convince me then, and it does not now. In the present book, Riddle also has an ancient source that mentions 'seed of haluppu' 'for a woman who does not get pregnant' (p. 19). For Riddle, this is further evidence of contraceptive knowledge, but 'who does not' could surely mean instead that the seed was used to improve fertility. But that's no problem for Riddle, as he argues for his chosen plants as regulators, having either fertility-enhancing or fertility-reducing effects.

A further problem for the pomegranate argument is that, by the time we reach the ancient Greco-Roman medical writers, only Soranus even mentions pomegranates (note, here it is indeed the peel, not the seeds) for contraception. Riddle gets around this by arguing that it had become less effective by Soranus' time (early Roman Empire), due to being bred for its taste, so that the amount of 'active estrogene compounds' was reduced, and also that people at that period had some more effective plant-based contraceptives, such as silphium (p. 48). As ancient silphium is unidentified and often assumed to be extinct, it is not of course possible to test its efficacy.

When he turns to artemisia, again Riddle finds fewer references to contraceptive properties than he would like in the extant classical medical authors (it only features in Dioscorides, Soranus and Hippocrates), so here he suggests that by this time 'women's problems were more the province of midwives' (p. 86). No evidence is given. While this book is all about women's ability to control their own fertility, midwives feature in it very little until the final chapter, on witches. Riddle tells us that 'Physicians, midwives and "wise women" who assisted others in birth employed [artemisia] for difficult births' (p. 80) but again gives no references. At the end of the book Riddle argues that knowledge of effective plant contraceptives was in sixteenth-century Europe seen as the province of midwives, who because of their herbal skills were targeted as witches (p. 144). Midwives, he says, were 'exterminated' and with them went the knowledge of contraception, so the population rose. This, as Riddle notes, is the argument of Gunnar Heinsohn and Otto Steiger, but he does not look at the refutation of their work by scholars such as Robert Jütte (*Contraception: a history*, Polity Press, 2008, pp. 55 ff.). Nor does the argument work here; if all women had this contraceptive knowledge, why would a reduction in the number of midwives make any difference?

The book is certainly not a page-turner. The argument jumps about, and often takes the form of detailed lists of sources for the use of each plant. There are moments when a 'general readership' is sought by the use of jokey modern parallels; for example, on the Uruk vase, 'The bearers are slightly plump, to us possibly on their way to a Weight-Watchers meeting, each naked and shaved of all body hair' (p. 8). I wonder why the Weight-Watchers' reference was thought necessary. This goes with other attempts to modernise, such as the statement that ancient Near Eastern temples 'were also health clinics' and a query as to whether 'temple midwives' would 'administer parturition at home, or did the near-term women simply check

in to the temple?' (p. 28). Because women dedicated their garments there, temples of Artemis 'functioned as an ancient equivalent of Goodwill Industries' (p. 79). If I understand it correctly, this American reference suggests the temples were a thrift store/charity shop, an idea for which there is no evidence whatsoever.

The amount of research here is very patchy. Riddle's supporters praise his use of primary sources, but these are all in languages that Riddle does not know, so that he has to depend on translations. More importantly still, far too often a reference is given not to the primary sources, but to a secondary work that uses them. His use of current research on the societies about which he is writing is very patchy; for example, he talks about 'a society known as the Thesmophoria' when this was a religious festival, not a 'society' (p. 45).

The book is also very poorly edited and badly proof-read. Words are missed out or transposed, and proper names come with a range of spellings. Marten Stol is spelled 'Stoll' throughout, and when a translation of an Assyrian text is cited from Stol (Riddle p. 29 citing Stol p. 114) the character 'Mami' is wrongly given as 'Mani'. A garbled sentence on p. 27 refers to a review that 'places Budin in the Herodotus is in the "Liar's School"' (and no explanation is provided as to what this means in any level) as well as 'My interpretation pomegranate thesis …' The same two sentences feature on both p. 22 and p. 50. Riddle argues that mandrakes would work because the drug was sedative, and 30% of infertility is due to stress; on p. 75 the 30% statement occurs twice, with the same secondary reference cited each time, and it features again on p. 76, recalling Lewis Carroll's Bellman's claim that 'What I tell you three times is true'.

A final comment about the dangers of decontextualising sources. Chapter 3 ends with a 'poem' that is in fact 4 lines from from the metaphysical poet John Donne. Riddle claims that Donne's 'Get with child a mandrake root' means that Donne 'knew and believed in the mandrake's fecundity' (p. 77). In the context of the poem, however, this instruction features in a list of impossible tasks, so a more standard interpretation would be that, despite the forked root that looks like human legs, the male reader simply can't impregnate a mandrake.

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