

LETTER TO THE EDITOR . . .

Carcass Temperature in Relation to Botulism

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In 1984, we described greatly elevated temperatures within decaying duck carcasses and suggested that this feature of the carcass microenvironment provided a "milieu" favourable for growth and toxin production by *Clostridium botulinum* during cool weather (Wobeser and Galmut, 1984). At the time I was unaware of any other report of this phenomenon. I have recently found a study in which carcass temperatures were measured. Payne (1965) used neonatal pig carcasses for the study of invertebrates associated with carrion. As occurred in ducks, the internal temperature of the pig carcasses rose much above that of either soil or air on day 3, and then as the flesh disappeared, declined to approximate that of the soil. Payne (1965) attributed the high internal temperature "to the high metabolic rates of the bacteria and dipterous larvae present."

The maximum temperature recorded in a pig carcass was 37.7 C, which is lower than that found in duck carcasses, but this may be a result of the difference in insulative value of pelage and plumage, respectively. These observations strengthen the potential importance of vertebrate carcasses as substrate for botulism toxin production, as the carcass may provide a microenvironment largely independent of ambient conditions.

LITERATURE CITED

- PAYNE, J. A. 1965. A summer carrion study of the baby pig *Sus scrofa* Linnaeus. *Ecology* 46: 592-602.
- WOBESER, G., AND E. GALMUT. 1984. Internal temperature of decomposing duck carcasses in relation to botulism. *Journal of Wildlife Diseases* 20: 267-271.

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