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Souvenirs to make your skin crawl

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A 54 year old man presented 3 weeks after a fortnight holiday in Belize with 'boils' on both ankles. His family doctor had prescribed oral flucloxacillin for presumed bacterial furunculosis, but both lesions had slowly increased in size, accompanied by a serous discharge and intermittent 'stabbing' pains. Examination revealed tender, furunculoid lesions with central puncta (figure, A). Subcutaneous myiasis was diagnosed. Petroleum jelly was applied to occlude the pores, causing larval spiracles to protrude (figure, B), but the larvae could not be removed intact with forceps alone. Small incisions were required to remove a second-stage instar larva of *Dermatobia hominis* from each lesion (figure, C). When last reviewed several weeks later he had had no further recurrence of his symptoms and both lesions had completely healed without complications.

Human subcutaneous myiasis is caused by the larvae (maggots) of *Cordylobia anthropophaga* ('tumbu' fly) in sub-Saharan Africa, and *Dermatobia hominis* ('tropical bot fly') in Central and South America. Female *D. hominis* flies attach their eggs to mosquitoes or muscoid flies, which deposit them on warm-blooded hosts (e.g. cattle, humans); body warmth then triggers the larvae to 'hatch' and penetrate the host's skin. Over 6-12 weeks the larvae develop subcutaneously through three stages, producing furunculoid lesions with central pores through which they breathe via spiracles and excrete serous/sero-purulent gut secretions. Left alone the third-stage larva will eventually leave the host and pupate in the soil to emerge as an adult fly in 1-3 months.

Tumbu fly larvae, and first-stage instar larvae of *D. hominis*, can usually be removed by simply occluding the pore, forcing the larva to emerge for air, when it may be extruded by gentle squeezing. However, barb-like rows of backward-projecting spines make second-stage and third-stage larvae of *D. hominis* more difficult to remove (figure, D), and over-zealous attempts to remove larvae piecemeal could exacerbate local inflammation by release of larval antigens. Surgical removal is therefore often required. Antibiotics are rarely indicated as bacterial super-infection is uncommon, probably because of bacteriostatic activity of larval gut secretions.

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Figure 1. Subcutaneous myiasis due to *Dermatobia hominis*

(A) Furunculoid skin lesion over right medial maleolus; (B) posterior respiratory siphon protruding from central pore following application of petroleum jelly; (C) and (D) second-stage instar larva of *Dermatobia hominis*: note the concentric rows of spines which impede easy removal of the larva.