

## On the paddling behaviour of a herring gull

P. G. Moore

32 Marine Parade, Millport, Isle of Cumbrae, Scotland  
KA28 0EF

E-mail: [p.geoff.moore@gmail.com](mailto:p.geoff.moore@gmail.com)

---

For some weeks (in September into November 2017) I had become aware that an adult herring gull, *Larus argentatus* (that was beginning to acquire its winter plumage) was, more often than not, to be seen on an area of irregularly-mown grass between the island's perimeter road and the rocky coast opposite my house (OS grid ref. NS171547). Casual observations revealed that it could be there come rain, wind or shine, often from daybreak to dusk largely oblivious of vehicular traffic, pedestrians walking along the adjacent pavement, dogs on leads or this observer sat watching from a park bench a few metres away (cf. Walker, 1949). I had originally thought that it might have something wrong with it but it was certainly able to fly away, as when a larger herring gull landed in its vicinity or it was very windy. It was present in the same area, irrespective of tidal conditions and opportunities for foraging on the nearby sandy beach or adjacent rocky shore. When not foraging on the grass it would sit atop a rocky promontory adjacent to the sward.

Even on quite a windy day, when standing-up it was almost constantly paddling the ground (Fig. 1) and pecking at the grass. Its paddling was most insistent, as it lifted each leg alternately, at a rate reported by Walker (1949) of 4 beats per second (confirmed here). It worked a small area of grass (sward height variously 3–7 cm) intently, stopping momentarily every so often and cocking its head to one side before head-darting after a revealed food item. It would then gradually shuffle its way backwards, creating a beaten track within the tarsus-high sward, paddling away as it went, sometimes turning in its track to recover items emerging within pecking distance. A successful peck rate of some 3 pecks per minute was recorded over a 15 minute period, with the identifiable items always being small earthworms (or perhaps fragments; note Barnard & Thompson, 1985). I never saw it pull an earthworm from its burrow in the manner of a blackbird (*Turdus merula*). Occasionally after a bout of vigorous paddling it would stretch a wing and leg out to one side. During calm weather, when another herring gull flew low over, it immediately ceased paddling and crouched down on the ground.



**Fig. 1.** Herring gull paddling the sward (Photograph: P. G. Moore).

In an attempt to mimic its paddling activity, I tapped the ground repeatedly, letting fall a cylinder of ash wood (3cm diameter, 214g weight) orientated vertically at a similar rate in the area the gull normally worked and was rewarded with an immature earthworm (10cm extended) of unidentified species within a minute. Adult herring gulls weigh substantially more: between 750–1250g.

Earthworms can be a major dietary item for herring gulls in meadows (Walker, 1949; Tinbergen, 1953, 1962), where large numbers have been reported participating in paddling. Given the success of this Cumbrae gull in foraging for earthworms, and their high energetic reward, it seems odd that this individual practised this habit alone. Herring gulls are normally gregarious, so other local gulls might have been expected to exploit the rewards betokened by this activity. I have noticed over the years, though, that herring gulls at different sites on the island seemingly have acquired different prey preferences; after a period of low water of spring tides, at one site there can regularly be found empty sea urchin tests (*Echinus esculentus*) on the pavement or perimeter road, at another the empty whelk shells (*Buccinum undatum*) that had been occupied by hermit crabs (*Pagurus bernhardus*), after such items have been dropped from a height onto hard surfaces. It appears then that prey preferences in herring gulls can be very localised, even individual, within the confines of even a small island, with particular gulls adopting and maintaining a search image focused on a prey item that proves to be energetically profitable, available and accessible locally (see also Ellis *et al.*, 2012). In the case of the coastal individuals foraging on earthworms, the energy expenditure involved in extensive paddling must be quite considerable, but the caloric content of earthworms is high (Bolton & Phillipson, 1976; Barnard & Thompson, 1985). They clearly represent sufficient reward for this individual, resulting in its

fixation on this, consistently available, food item.

#### ACKNOWLEDGEMENT

I am grateful to Dr Bernie Zonfrillo (Glasgow University) for supplying a scan of Walker's note and for his helpful comments on my observations.

#### REFERENCES

- Barnard, C. J. & Thompson, D. B. A. (1985). *Gulls and Plovers: the Ecology and Behaviour of Mixed-species Feeding Groups*. Croom Helm, London & Sydney.
- Bolton, P. J. & Phillipson, J. (1976). Burrowing, feeding, egestion and energy budgets of *Allobophora rosea* (Savigny) (Lumbricidae). *Oecologia* 23, 225–245.
- Ellis, J. C., Allen, K. E., Rome, M. S. & Shulman, M. J. (2012). Choosing among mobile prey species: why do gulls prefer a rare subtidal crab over a highly abundant intertidal one? *Journal of Experimental Marine Biology and Ecology* 416–417, 84–91.
- Tinbergen, N. (1953). *The Herring Gull's World*. Collins, London.
- Tinbergen, N. (1962). Foot-paddling in gulls. *British Birds* 55, 117–120.
- Walker, A. B. (1949). Herring-gull “paddling” on grass field. *British Birds* 42< 222–223.