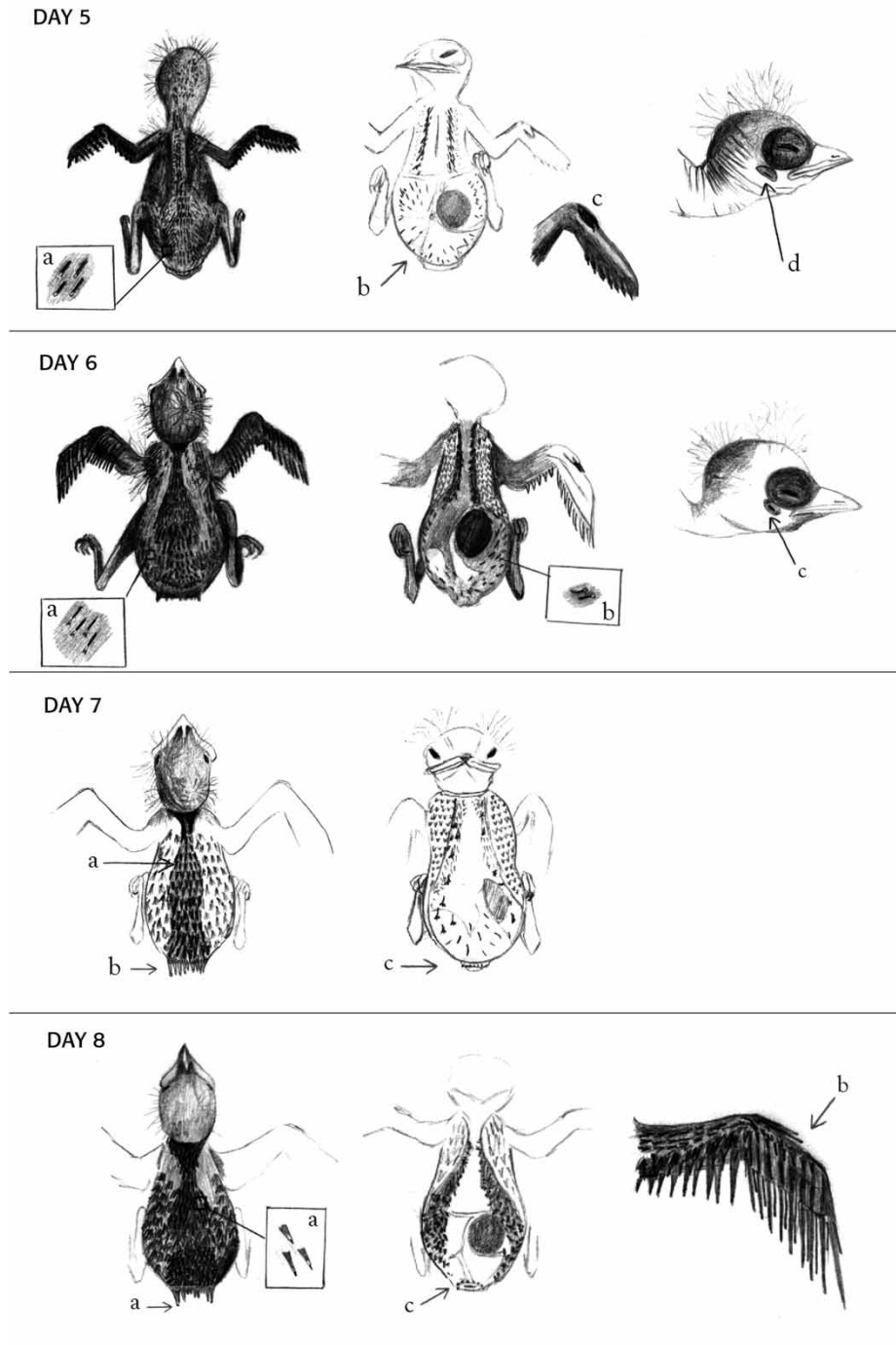


**Figure 1.** Developmental traits of Barn Swallow nestlings aged 1–4 days.

(Fig 2, day 6a). They also emerge on the belly, or at least they protrude like small lumps below the skin; many of the emerged ventral pins already show white and thin contour feathers (Fig 2, day 6b). The eyes start to open and the ear openings are small cavities uncovered by the

surrounding skin (Fig 2, day 6c). The timing of eye opening differs from previous observations reporting eye opening between days 4 and 5 (see McGinn & Clark 1978, Thompson 1992). In any case, we may conclude that eye opening never happens before day 4.



**Figure 2.** Developmental traits of Barn Swallow nestlings aged 5–8 days.

### Day 7

Feather sheaths on the upper part of the dorsal tract start to emerge (Fig 2, day 7a). Eyes are visibly open. Neither black tail feathers nor white circum-cloacal (caudal) feathers are unsheathing yet (Fig 2, day 7b, c).

### Day 8

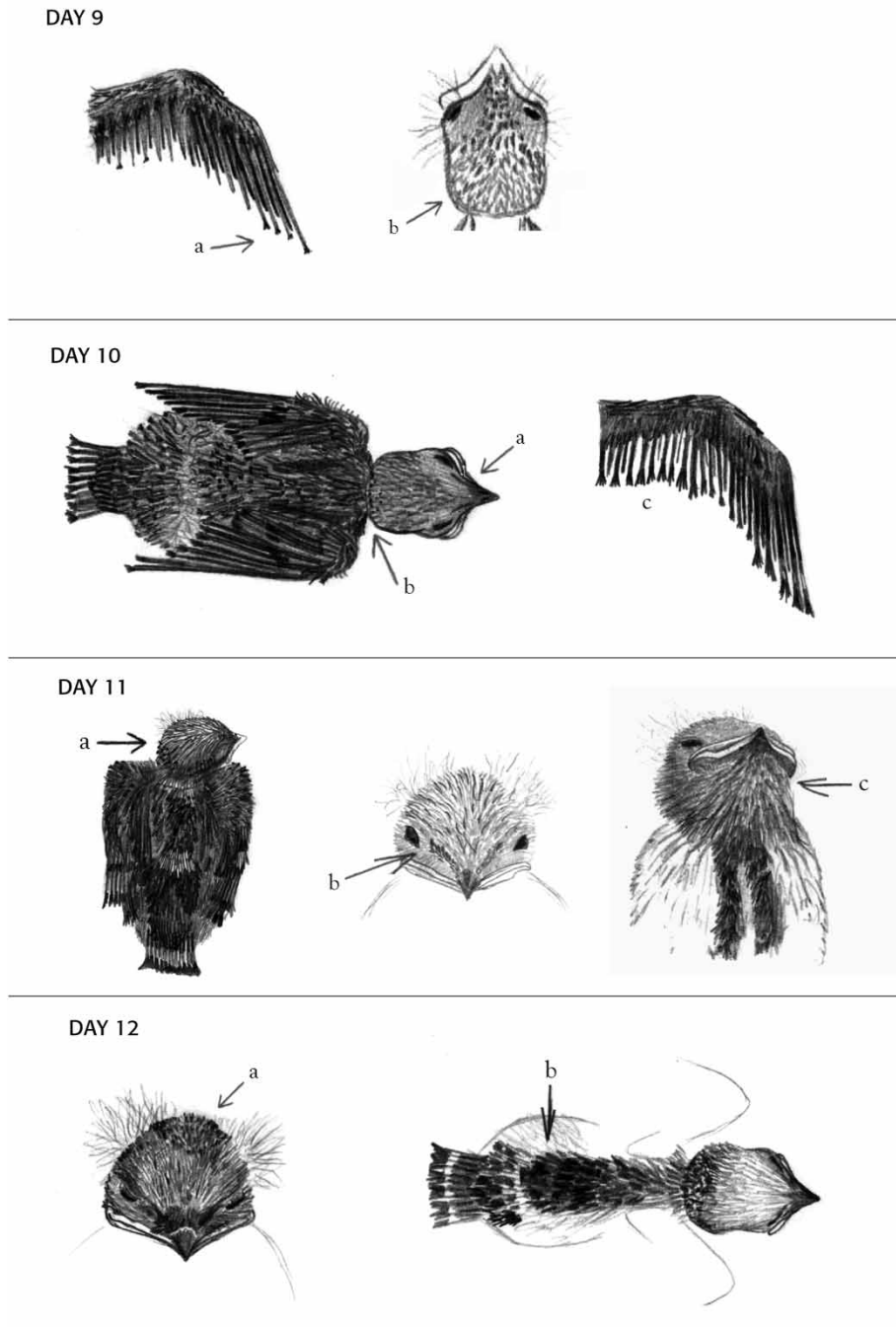
Little black tufts of feathers emerge from sheaths on the tail and the dorsal tracts (Fig 2, day 8a). Alula usually unsheathes on the same day as tail feathers (Fig 2, day 8b). White circum-cloacal (caudal) feathers unsheathe (Fig 2, day 8c).

**Day 9**

Black feathers unsheathe from the outermost primary sheaths (Fig 3, day 9a). By contrast, feathers on the head and nape are not yet visible (Fig 3, day 9b) and, only in a few cases, some scattered black feathers are observed on the nape.

**Day 10**

Some little brownish feathers unsheathe at both sides of the bill, very close to the eyes (Fig 3, day 10a). The presence of black feathers on the nape becomes a good clue to ageing nestlings from this day onwards (see Table 1). On day 10, around 38% of nestlings develop a



**Figure 3.** Developmental traits of Barn Swallow nestlings aged 9–12 days.

few feathers on the nape (Fig 3, day 10b). Also the secondary feathers unsheathe now (Fig 3, day 10c).

### Day 11

At this age, at least some feathers have unsheathed on the nape in most nestlings (Fig 3, day 11a). Unsheathed feathers at both sides of the bill become numerous and form two rows (Fig 3, day 11b). A few brownish feathers are present below the bill (Fig 3, day 11c).

### Day 12

Feathers unsheathed on the crown (Fig 3, day 12a) and those on the central part of the dorsal tract show bluish tints in 97% of nestlings (Fig 3, day

12b). Bluish colour is rarely present in 11-day-old chicks.

### Day 13

Black contour feathers have already covered the crown and part of the face (Fig 4, day 13).

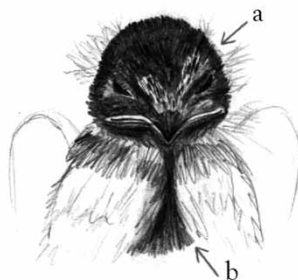
### Day 14

Black contour feathers cover most of the head and face, but a small grey area is still uncovered between the eyes and the bill (Fig 4, day 14a). White unsheathed breast feathers are well developed on both sides of the body, but leave an uncovered gap in-between (Fig 4, day 14b).

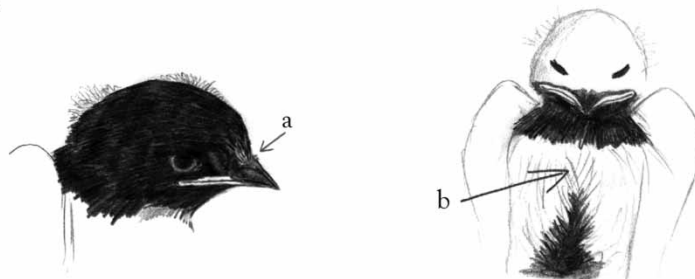
DAY 13



DAY 14



DAY 15



**Figure 4.** Developmental traits of Barn Swallow nestlings aged 13–15 days.