

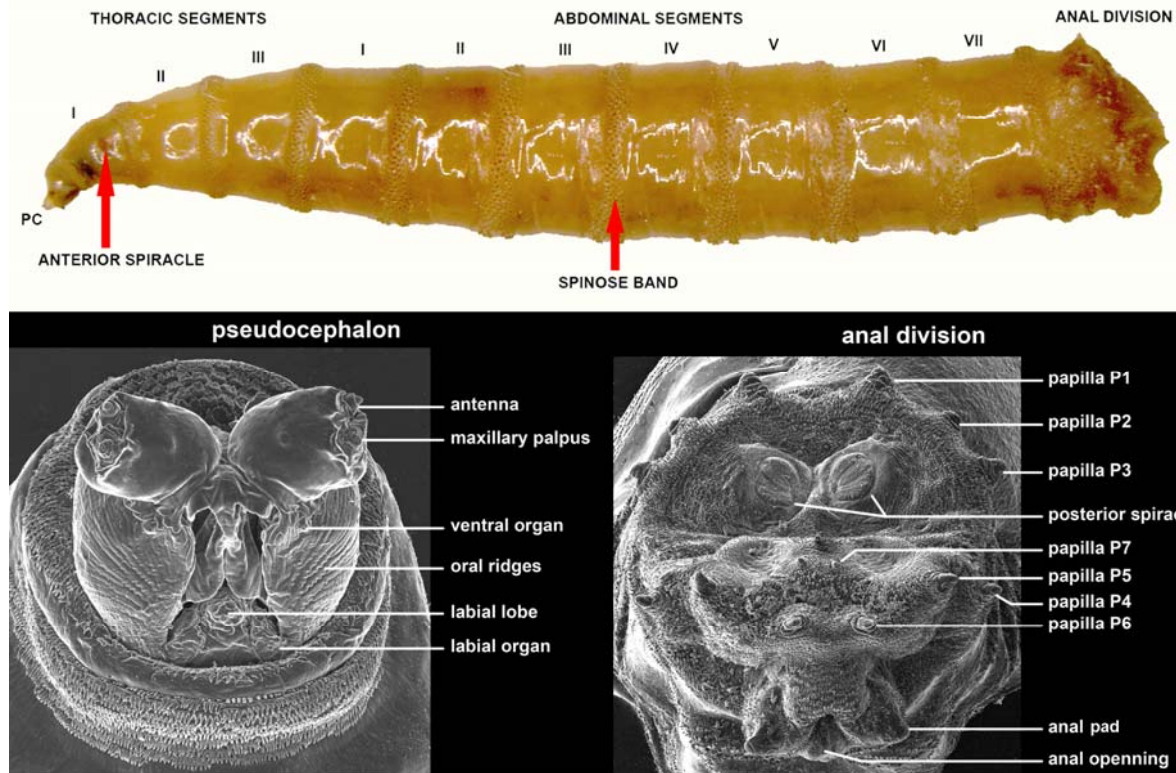
Key for identification of European and Mediterranean  
blowflies (Diptera, Calliphoridae) of forensic importance  
Third instars



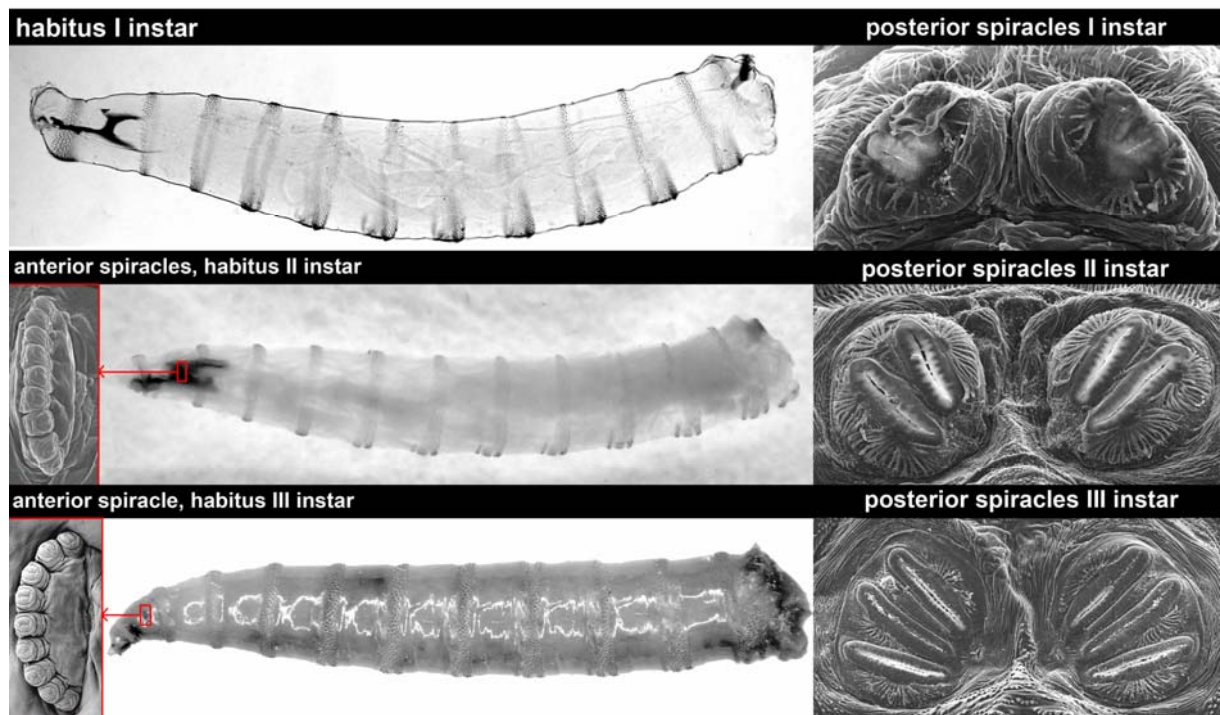
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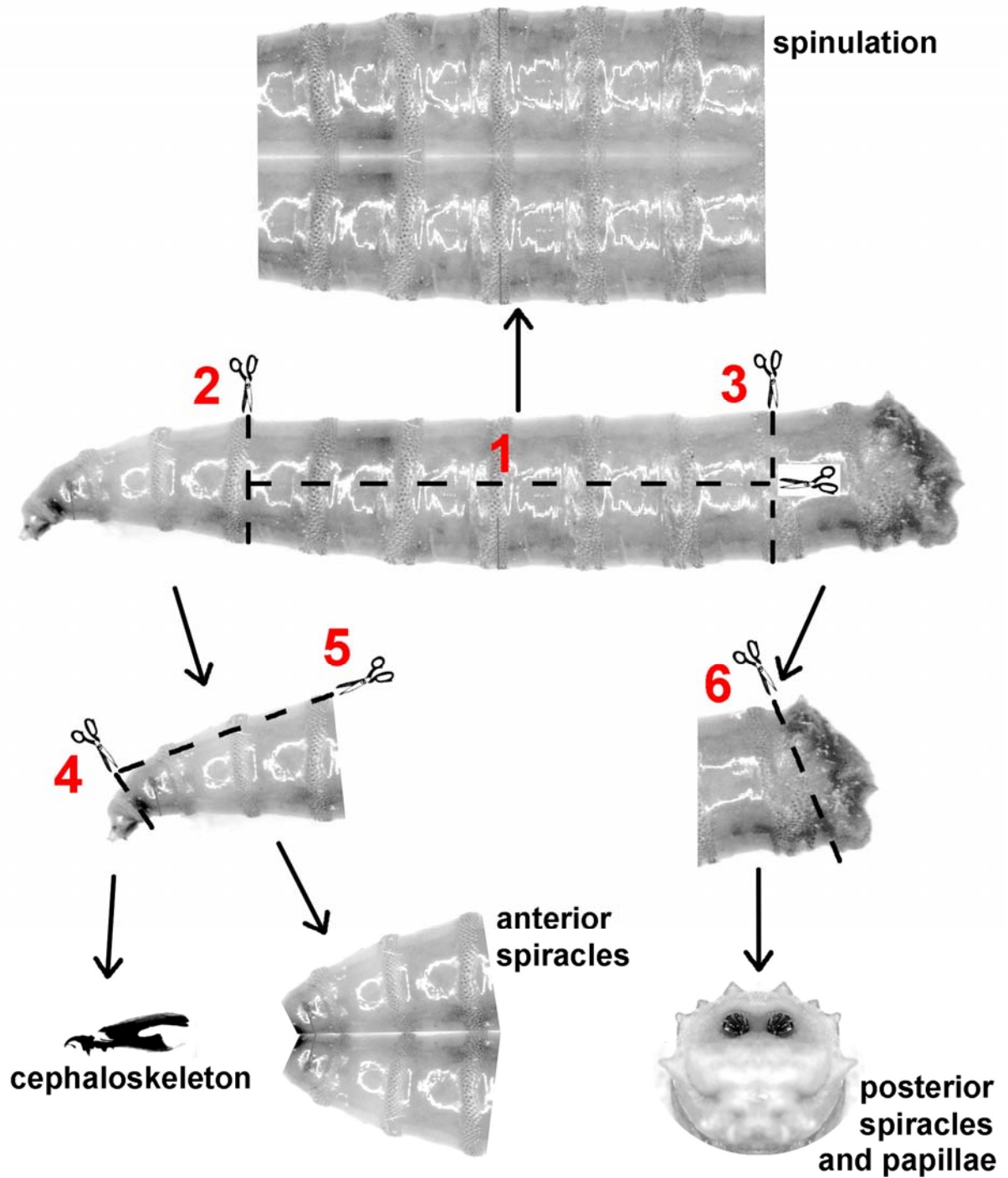
## General morphology



## How to recognize instars



## Preparation





## Key for identification of E&M blowflies, third instars

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10. – spines on thoracic segments predominantly with serrated tips (Figs 3HL), spines different sizes . . . . . **11**  
– spines with serrated tips on thoracic segments rare or absent (Fig. 4C), all spines small of similar size . . . . . **12**
11. – papillae around the spiracular field large (Fig. 1H), all posterior spinose bands incomplete . . . . . ***Protophormia terraenovae***  
– papillae arranged around the spiracular field small (Fig. 1G), at least some posterior spinose bands complete . . . . . ***Phormia regina***
12. – distance between each P1 similar to distance between P1 and P2 (Fig. 1J) . . . . . ***Lucilia sericata***  
– distance between each P1 larger than distance between P1 and P2 (Figs 1I, 5E) . . . . . **13**
13. – cephaloskeleton without sclerotised area below the posterior tip of ventral cornua (Fig. 5A), posterior spiracles widely arranged (SDF>1) (Fig. 5B) . . . . . ***Lucilia silvarum***  
– cephaloskeleton with sclerotised area below the posterior tip of ventral cornua (Figs 4EH), posterior spiracles closely arranged (SDF<0.9) (Figs 4FI) . . . . . **14**
14. – posterior spinose band on abdominal segment VI interrupted dorsally (Fig. 4N), postero-dorsal angle of the basal part of the mouthhook with process directed postero-dorsally (Fig. 4E) . . . . . ***Lucilia caesar***  
– posterior spinose band on abdominal segment VI complete (Fig. 4O), postero-dorsal angle of the basal part of the mouthhook with process directed posteriorly (Fig. 4H) . . . ***Lucilia illustris***



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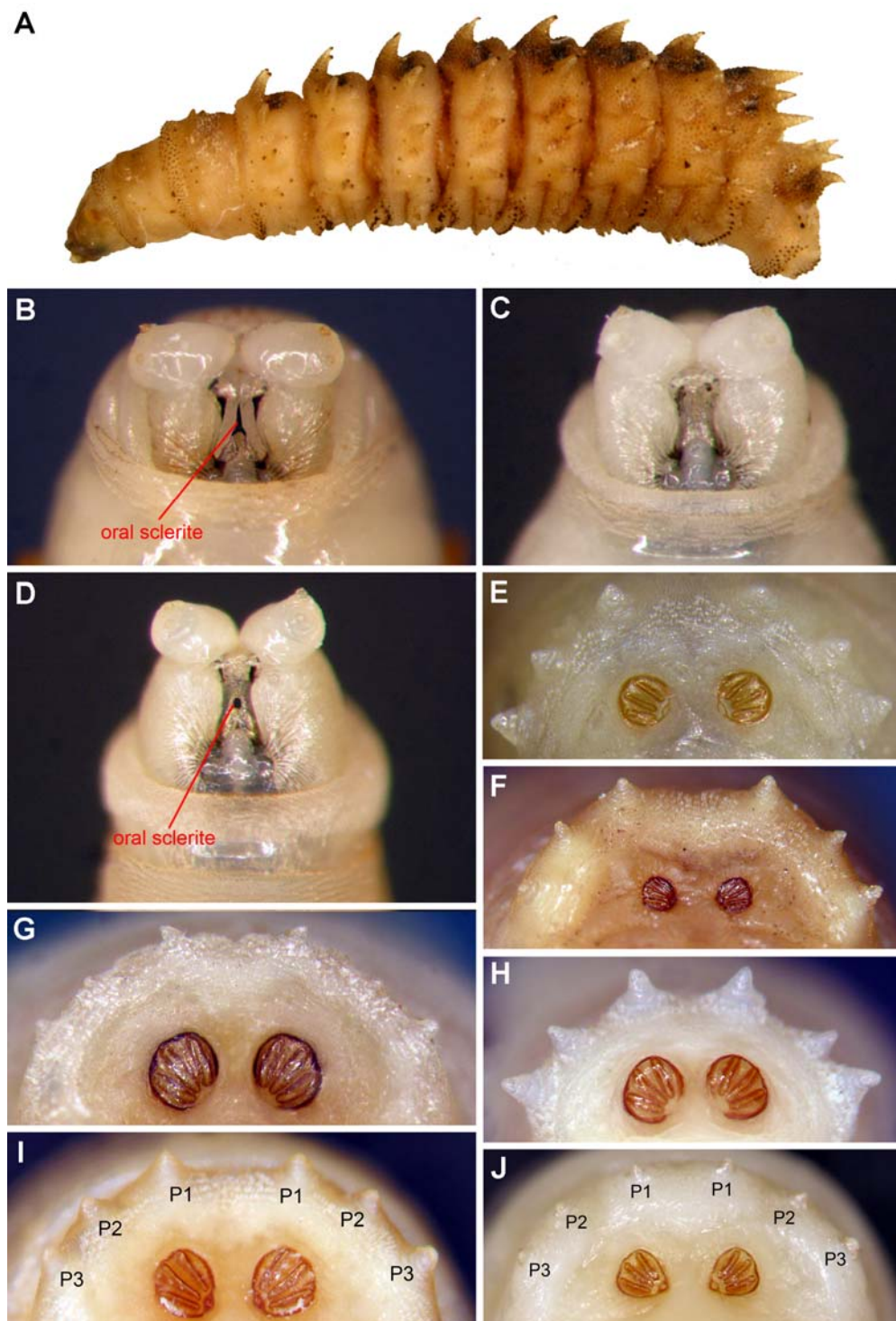


Fig. 1. Third instars of European blowflies: A – *Chrysomya albiceps*, habitus, lateral view; B – *Calliphora vomitoria*, pseudocephalon, ventral view; C – *Lucilia sericata*, pseudocephalon, ventral view; D – *L. ampullacea*, pseudocephalon, ventral view; E – *Calliphora vicina*, anal division, upper half of spiracular field; F – *Cynomya mortuorum*, anal division, upper half of spiracular field; G – *Phormia regina*, anal division, upper half of spiracular field; H – *Protophormia terraenovae*, anal division, upper half of spiracular field; I – *Lucilia illustris*, anal division, upper half of spiracular field; J – *Lucilia sericata*, anal division, upper half of spiracular field.

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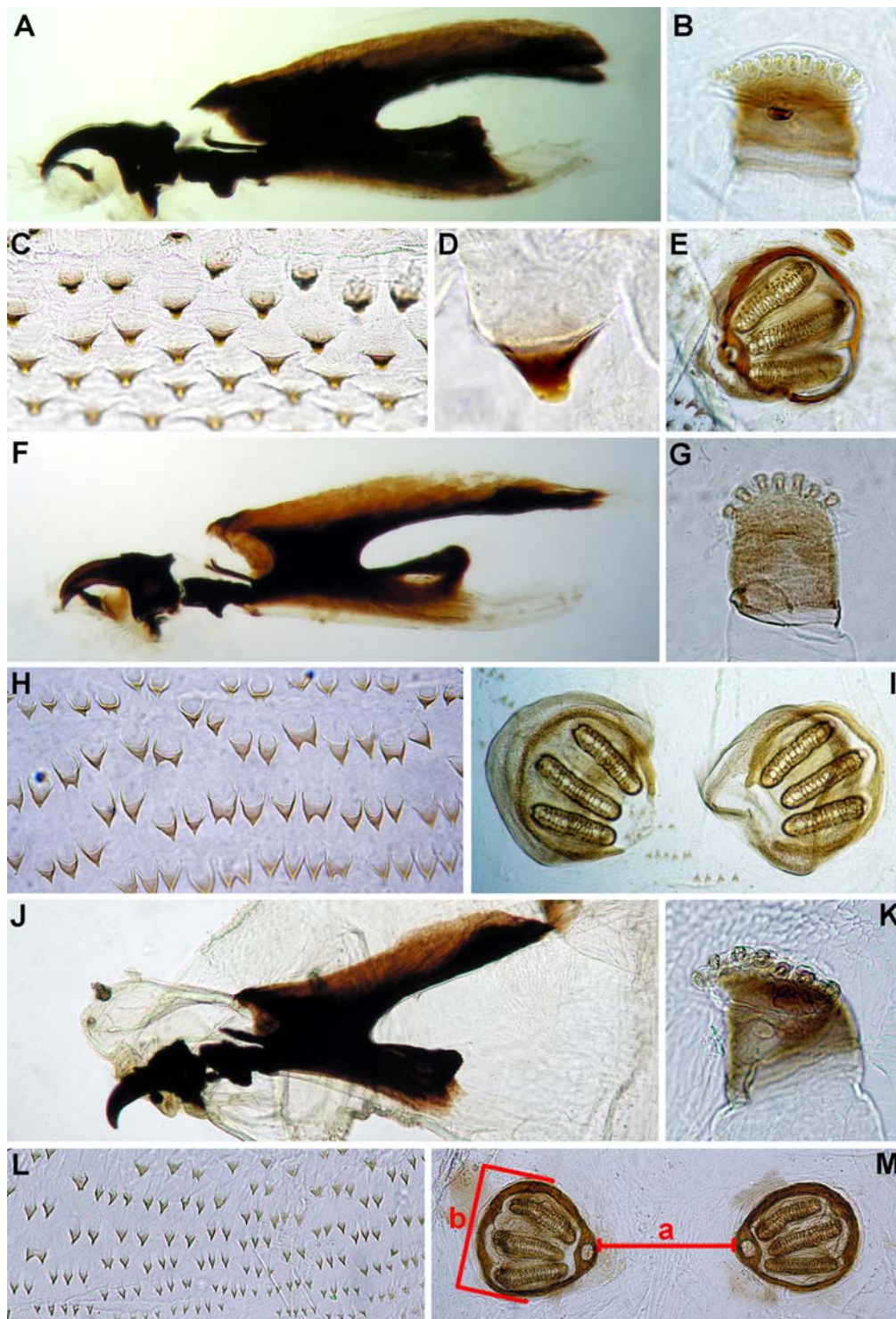


Fig. 2. Third instars of *Calliphora* and *Cynomya*: A – *Calliphora vomitoria*, cephaloskeleton, lateral view; B – *C. vomitoria*, anterior spiracle; C – *C. vomitoria*, thoracic segment III, spines; D – *C. vomitoria*, thoracic segment III, spine; E – *C. vomitoria*, posterior spiracle; F – *Calliphora vicina*, cephaloskeleton, lateral view; G – *C. vicina*, anterior spiracle; H – *C. vicina*, thoracic segment III, spines; I – *C. vicina*, posterior spiracles; J – *Cynomya mortuorum*, cephaloskeleton, lateral view; K – *C. mortuorum*, anterior spiracle; L – *C. mortuorum*, thoracic segment III, spines; M – *C. mortuorum*, posterior spiracles, SDF = a/b.



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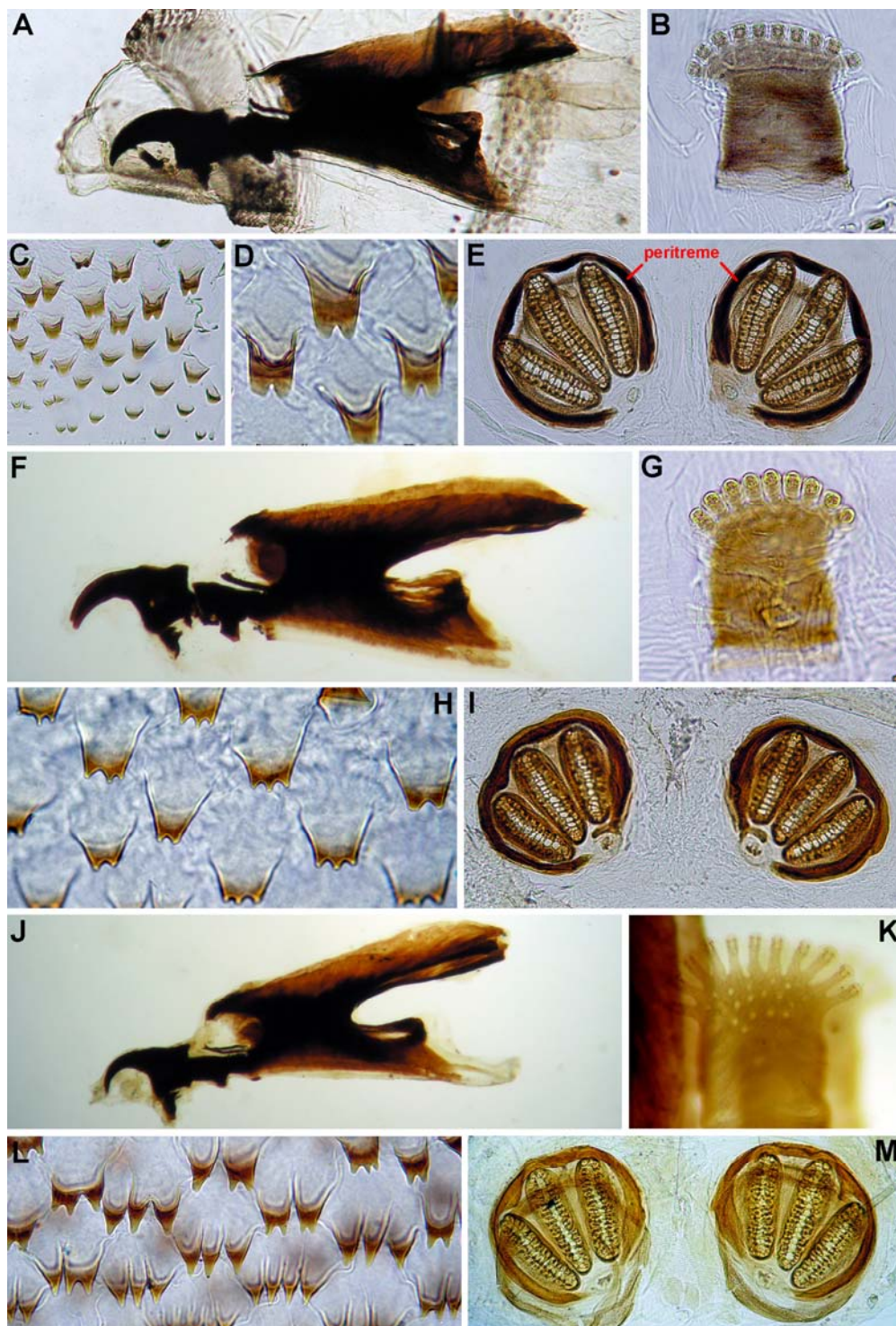


Fig. 3. Third instars of Chrysomyinae: A – *Chrysomya megacephala*, cephaloskeleton, lateral view; B – *Ch. megacephala*, anterior spiracle; C – *Ch. megacephala*, thoracic segment III, spines; D – *Ch. megacephala*, thoracic segment III, spines; E – *Ch. megacephala*, posterior spiracles, F – *Phormia regina*, cephaloskeleton, lateral view; G – *P. regina*, anterior spiracle; H – *P. regina*, thoracic segment III, spines; I – *P. regina*, posterior spiracles; J – *Protophormia terraenovae*, cephaloskeleton, lateral view; K – *P. terraenovae*, anterior spiracle; L – *P. terraenovae*, thoracic segment III, spines; M – *P. terraenovae*, posterior spiracles.



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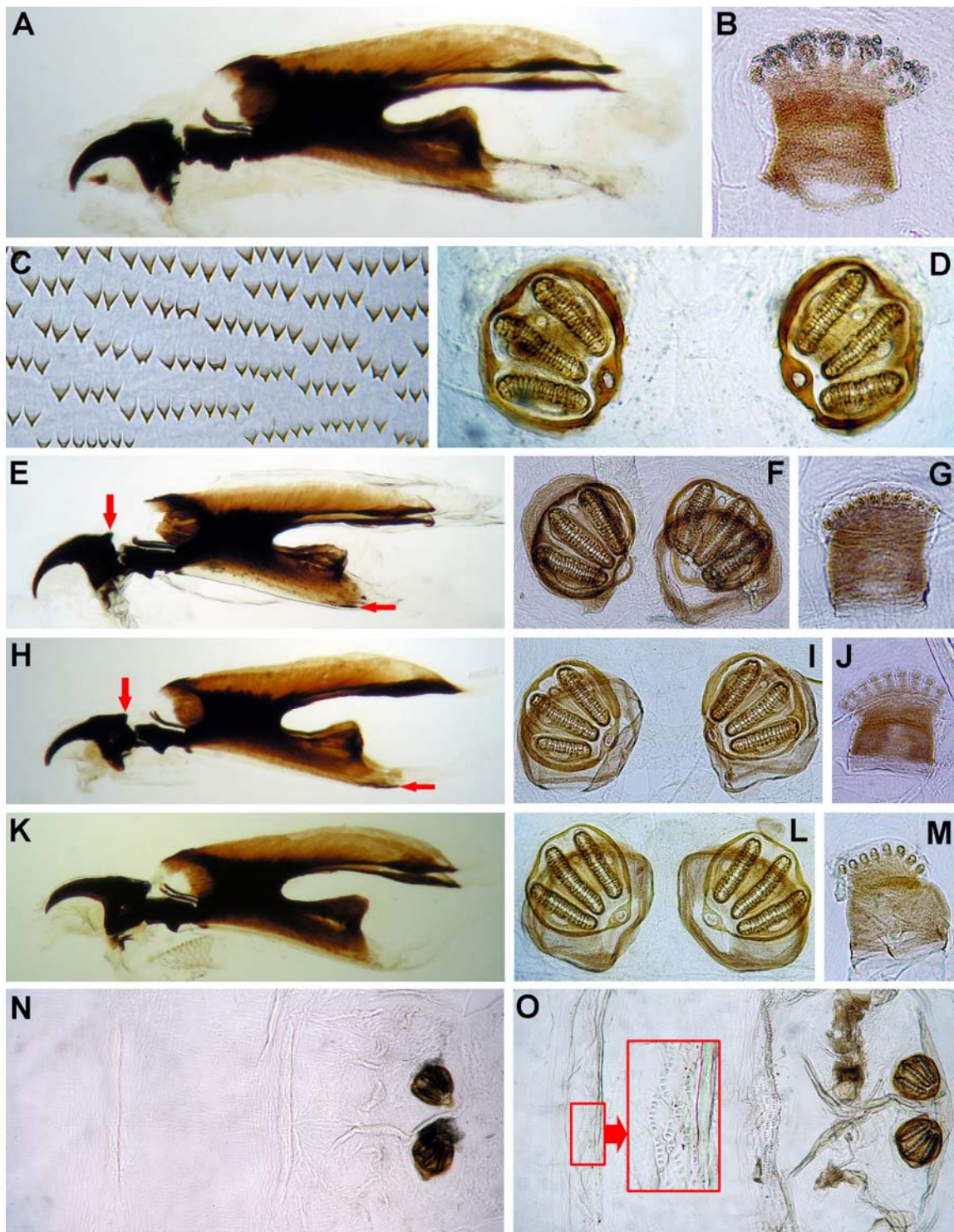


Fig. 4. Third instars of *Lucilia*: A – *Lucilia ampullacea*, cephaloskeleton, lateral view; B – *L. ampullacea*, anterior spiracle; C – *L. ampullacea*, thoracic segment III, spines; D – *L. ampullacea*, posterior spiracles, E – *L. caesar*, cephaloskeleton, lateral view; F – *L. caesar*, posterior spiracles; G – *L. caesar*, anterior spiracle; H – *L. illustris*, cephaloskeleton, lateral view; I – *L. illustris*, posterior spiracles; J – *L. illustris*, anterior spiracle; K – *L. sericata*, cephaloskeleton, lateral view; L – *L. sericata*, posterior spiracles; M – *L. sericata*, anterior spiracle; N – *L. caesar*, abdominal segment VII, dorsal view; O – *L. illustris*, abdominal segment VII, dorsal view.



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Fig. 5. Third instars of *Lucilia* and *Chrysomya*: A – *Lucilia silvarum*, cephaloskeleton, lateral view; B – *L. silvarum*, posterior spiracles; C – *L. silvarum*, anterior spiracle; D – *L. silvarum*, thoracic segment III, spines, E – *L. silvarum*, anal division, posterior view; F – *Chrysomya marginalis*, cephaloskeleton, lateral view; G – *Ch. marginalis* posterior spiracles; H – *Ch. marginalis*, anterior spiracle; I – *Ch. marginalis*, thoracic segment III, spines; J – *Ch. marginalis*, thoracic segment III, spine; K – *Ch. marginalis*, pseudocephalon, ventral view.

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