In 2011, a new comprehensive conservation project was initiated for the Vertebrate Palaeontology collections of the Museo Argentino de Ciencias Naturales ‘Bernardino Rivadavia’. Between 2011-2012, diagnostic assessments were carried out and urgent needs of the collection were resolved (Alvarez, 2012; 2020). Then, three stages were established according to the containment structure of the fossils: large wooden boxes, shelves and cabinets. In the first stage (2013-2015), 360 wooden boxes containing 3,814 records (including 39 type specimens) were worked on with the collaboration of volunteers and museum maintenance staff.

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**Methods and Materials**

These wooden structures were damaged by insects identified as Anobium punctatum, Coleoptera (Fig. 1). Larvae were found in the tooth sockets of a fossil (Fig. 2). Long, winding circular tunnels and sawdust were observed (Fig. 3, 4, 5; Pinninger, 2012).

**Results and Conclusions**

Hot melt technology wadding is useful in conservation because the polyester fibers are surrounded by a low melting point copolymer that welds the fibers together when heat-bonded. In addition, it is self-extinguishing (burns without flame), resistant to frequent washing, odor and resin free, resistant to mold and rot, does not absorb moisture, etc. After treatment, the boxes were protected from attack by insects, fungi and algae, as well as from water absorption. Comparison of the lists made and the databases showed that 2.1% (80 exemplars) of the material checked did not correspond to the location in these boxes, making it difficult to locate them in the collection. On the other hand, 1.5% (59 exemplars including one type fossil) of the fossils were not found in their corresponding box.

From each box with lids (Fig. 8) we carefully removed, cleaned, consolidated and glued the fossils. The fossils were found mixed with wood shavings and paper (Fig. 9). While the wooden boxes were being treated, they were covered temporarily in cardboard boxes with their new packaging.

The wooden boxes were dusted and then treated with a preventative and curative wood preservative (PENTA concentrado; Fig. 10). This work was carried out by maintenance staff in an outdoor area adjacent to the museum. Boxes were immersed in the preservative liquid for about 20 minutes. They were then left to dry and evaporate the gases for 15 days before being returned to the collection. The badly deteriorated boxes were replaced with others that were also treated.

For filling each box, these were identified with a label identifying (censed). Finally, the fossil was painted orange, indicating the location of each material in that box.

The fossils in some opened trays were covered with dust and required cleaning before treatment (Fig. 6). To clean the trays and the glyptodon plates, we used an air jet and then we cleaned with 70% alcohol with a brush. In this way, the fossils in successive layers vertically (Fig. 7).


Penta concentrado (wood preservative) http://www.petrilac.com.ar/productos/maderas/penta_concentrado


Trihedral SA. (wadding) http://www.geocurator.org/events/104-sppc/sppc2020-poster-gallery

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Riessolle SA. (wadding) https://www.geocurator.org/events/104-sppc2020-poster-gallery

