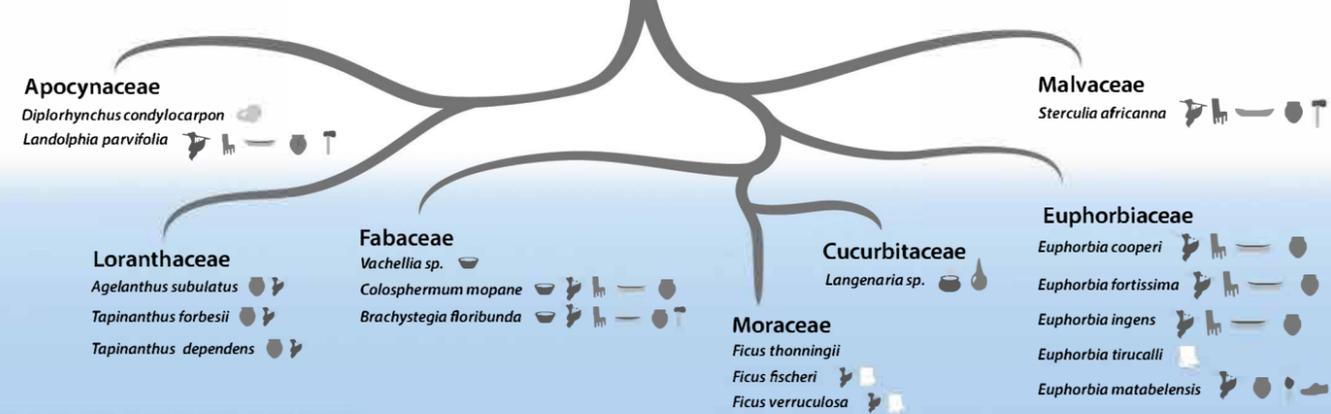
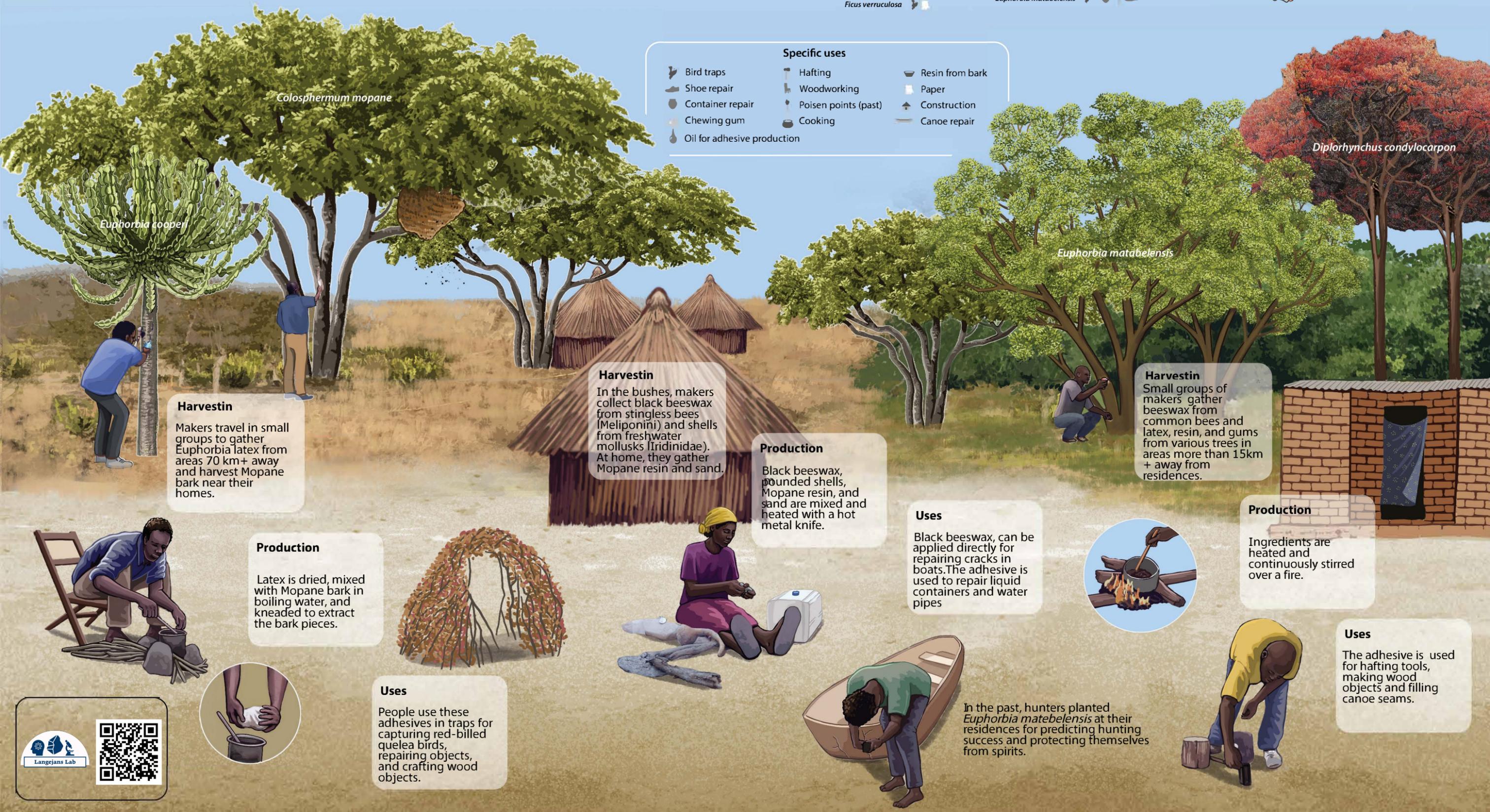


Natural-Inspired Materials: Traditional Adhesives of Zambia

In Zambia, people use diverse organic and inorganic ingredients for traditional glue, with flexible recipes transmitted across generations. This tradition reflects sustained human interaction with species from families like Euphorbiaceae and Apiaceae. The diversity and adaptability of traditional adhesive production suggest that further research would unveil the role of social and ecological diversity in the evolution of these human-made materials.



- Specific uses**
- Bird traps
 - Shoe repair
 - Container repair
 - Chewing gum
 - Oil for adhesive production
 - Hafting
 - Woodworking
 - Poisen points (past)
 - Cooking
 - Resin from bark
 - Paper
 - Construction
 - Canoe repair



Harvestin
 Makers travel in small groups to gather Euphorbia latex from areas 70 km+ away and harvest Mopane bark near their homes.

Harvestin
 In the bushes, makers collect black beeswax from stingless bees (Meliponini) and shells from freshwater mollusks (Iridinidae). At home, they gather Mopane resin and sand.

Harvestin
 Small groups of makers gather beeswax from common bees and latex, resin, and gums from various trees in areas more than 15km + away from residences.

Production
 Latex is dried, mixed with Mopane bark in boiling water, and kneaded to extract the bark pieces.

Production
 Black beeswax, pounded shells, Mopane resin, and sand are mixed and heated with a hot metal knife.

Uses
 Black beeswax, can be applied directly for repairing cracks in boats. The adhesive is used to repair liquid containers and water pipes

Production
 Ingredients are heated and continuously stirred over a fire.

Uses
 People use these adhesives in traps for capturing red-billed quelea birds, repairing objects, and crafting wood objects.

In the past, hunters planted *Euphorbia matabelensis* at their residences for predicting hunting success and protecting themselves from spirits.

Uses
 The adhesive is used for hafting tools, making wood objects and filling canoe seams.

