Unopened gumnuts of the *Eucalyptus caesia*

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Eucalypts are active pyrophytes, meaning that they need fire for their seeds to germinate. The gumnuts of the *Eucalyptus caesia* are depicted here with enclosed valves, protecting the seeds within its woody capsule.

Closed follicles of the *Banksia serrata*

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Banksias are passive pyrophytes. This photograph depicts the closed follicles of the *Banksia serrata* in which its seeds are encased and protected from fire.

Smoke triggering the opening of the follicles

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Banksias have serotinous cones. Serotiny means that the banksia retains its non-dormant seeds until exposed to fire. This photograph demonstrates how the chemicals in smoke have stimulated the opening of the banksia's follicles.

Release of the seeds

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The follicles of the banksia are fully opened after the fire, releasing the seeds within. The paper-thin seeds are able to successfully germinate in ash.

Woody capsule protects the seeds

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The gumnuts in this photograph remain closed, despite the heat of the fire, showing how the woody capsule has protected the seeds in order to ensure species survival. When triggered by sufficient heat and smoke, the woody capsules will disperse the seeds onto the nutrient-rich ash for repopulation.

Capsule releases seeds post-fire

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A few days after the fire, the valves of the gumnut are exerted. Though the woody capsule is burnt and blistered, the tiny seeds inside are undamaged. These seeds fall out easily, and are dispersed on the ground post-fire, allowing the species to regenerate.