

# **Mornington Peninsula National Park**

An excursion and fieldwork resource for schools



# Congratulations for taking the leap outdoors!

Excursions and field trips are an important part of the educational experience for students, offering handson, concrete experiences that are important for reinforcing key concepts taught in the classroom.

Our aim is that every student leaves a park or reserve with a greater appreciation not only of its unique values, but how these are connected to other places and larger issues, and a desire and the know-how to get involved in making a difference.

Our excursion/fieldwork resources aim to help students:

- develop a sense of wonder, curiosity and respect for our parks and the people and environments they support
- develop their knowledge of their own locality and region and how places are connected
- understand the changes that are occurring in our parks and what strategies are being employed to manage these changes
- consider some of the complex interrelationships between the physical environment and the flora, fauna and fungi that live in our parks
- become informed, responsible and active citizens who contribute to the protection of our special places.

This resource is designed to provide teachers with ideas for planning exciting and experiential learning activities out in our beautiful parks, reserves and waterways.

We would love to hear about ways we can improve this resource to support teachers who take their lessons outdoors. Please contact education@parks.vic.gov.au with your feedback.

# Why visit?

The Mornington Peninsula National Park is a diverse and special area for many people around Melbourne and greater Victoria, who use the region as a getaway to connect themselves to the beautiful coastline. Situated about 90 kilometres south of Melbourne, Mornington Peninsula National Park (2680 ha) extends along the coast from the edge of Point Nepean National Park at the western end of the Mornington Peninsula, to Bushrangers Bay. It is here that the park becomes a narrow band and turns inland along the Main Creek valley until it joins the more expansive Greens Bush section of the park. A separate area at Flinders is also included in the national park.

Mornington Peninsula National Park offers a wide range of excursion opportunities across diverse vegetation communities including coastal dune scrub and grassy forests, banksia woodlands, coastal heathlands, heathy woodlands, riparian forests, and swamps.

#### For teachers

This self-guided excursion is designed to be linked to the Victorian Curriculum for the subjects of geography, science and history, but can be enjoyed by a wide range of students who want to explore, discover and learn about our parks. It is suitable and scalable from Levels 5–10. Some suggested linkages to the Victorian Curriculum are provided below:

Subject	Level	Content descriptions	
Geography	5-6	Factors that shape places and influence connections	
	7-8	Water in the world	
		Landforms and landscapes	
	9-10	Environmental change and management	
Science	5-6	Biological sciences	
	7-8	Biological sciences	
		Earth and space sciences	
	9-10	Biological sciences	
History	5-6	The Australian colonies	
	7-8	Aboriginal and Torres Strait Islander peoples and culture	
	9-10	The making of the modern world – Australia	

Due to the length of coastline in this national park, a field trip should select from the range of sites available to fulfil a school's curriculum requirements. Activities should be planned across a day visit.

## Before you go

Make sure you have reviewed the information provided for planning an excursion at <a href="http://parkweb.vic.gov.au/learn">http://parkweb.vic.gov.au/learn</a> for safety and permit requirements and have checked the facilities available.

All groups are required to let us know you're coming. Please complete a Group Activity Statement downloadable from http://parkweb.vic.gov.au/learn and email to: groupactivities@parks.vic.gov.au at least four weeks prior to arrival. This will assist us to alert you to any park closures, storm damage or management activities such as planned burning or pest animal programs that may affect your visit. It also forms part of

your group's emergency management plan and provides quick access to emergency contacts, should your group need assistance.

You will be visiting a national park that is an important home to many species of plants and animals, some found in only a few other areas, and others nowhere else in the world! Please remember to keep to the paths, don't pick or take any vegetation and take your rubbish home with you.

For safety in the bush we recommend a leader to group size ratio of 1:10 as outlined in the Adventure Activity Standards for Bushwalking, and on the reef 1:25 (with no more than 30 on the reef at a time). As Mornington Peninsula is a national park, please read through our Minimal Impact Guidelines to help plan your trip to ensure you tread lightly on our environment.

Always stay on the designated paths and avoid walking on the sand dunes and climbing over the landscape, as this causes erosion of the sensitive coastal environment.

This park has some of the best breeding habitat in Victoria for the threatened Hooded Plover, making it very important to balance visitor recreation with their conservation. When visiting the park during late spring and summer, you will see signs and fences around active nest sites. Please ensure that you avoid disturbing the breeding sites.

# Collecting data

We encourage you to gather primary data during your field trip to support a truly immersive and hands-on experience. Pictures, drawings and records of sightings are all easy to take and don't require a research permit. If you'd like to do something that involves moving off the paths, including transects or quadrats, you are required to complete an application for a research permit.

## Structuring your excursion

Since Mornington Peninsula National Park covers some 40 kilometres as a coastal strip; it is not possible to visit all locations in one day. Teachers will need to select which places to visit being determined by access to the coast and the purpose of the visit. The following table is designed to assist in the choice of locations.

LOCATION	GEOGRAPHY	HISTORY	SCIENCE	KEY ASPECTS
Portsea Ocean	•		•	Panoramic views of coastal strip;
Beach				sandy beach and sand dunes;
				vegetation species; revegetation
Sorrento Ocean Beach	•	•	•	Panoramic views of coastal strip; sandy beach and rock pools; sand dunes and walking trail; cliff landforms; indigenous presence; vegetation species; revegetation;
				first planned park
Cape Schanck	•	•	•	Volcanoes and climate change millions of years ago; cliff landscape; wave impact; rock pools; boardwalk; vegetation species; historic lighthouse and museum
Flinders	•		•	Marine sanctuary with large area of rock pools and sandy beach

LOCATION	GEOGRAPHY	HISTORY	SCIENCE	KEY ASPECTS
Baldry Crossing,	•		•	Bush trails, long and short, provide
Greens Bush				contrasts in vegetation species and
				contrast to coastal species

<sup>\*</sup>Note: all time indicators are for walking time; allow additional time for any learning activities that are to take place while on the fieldtrip.

#### Portsea Ocean Beach

From the car park at Portsea Ocean Beach the visual impact of the coastline is stunning. Cape Schanck appears in the distance beyond bays and cliffs. Before taking a walk down the ramp onto the sand, spend some time at the interpretative signs. From the beach look up and realise the height of the sand dunes now covered in vegetation. Between August and April walking on the beach should be contained to the area of wet sand, as the threatened hooded plover nests on the sand near the dunes. Portsea Ocean Beach is a great place to spot these very small, well camouflaged shorebirds which feed in the intertidal zone (http://parkweb.vic.gov.au/\_\_data/assets/pdf\_file/0007/679030/managing-hooded-plover-birdlife-australia.pdf). A short walk along the beach to the east will reveal a massive blowout where erosion has claimed a sand dune. A range of recreational activities are likely to be taking place, and Portsea Ocean Beach therefore offers students an opportunity to study the relationship between recreation and conservation.

#### Sorrento Ocean Beach

Sorrento Ocean Beach offers a wide range of educational experiences. From the car park a short, sharp stairway provides access to a rotunda, from which the views are magical (allow 15 minutes). It is a wonderful location to get a perspective of place – views range as far as Point Nepean to the west, Cape Schanck to the east, and the bay-side suburbs toward the city. A toposcope indicates directions and distances to key points of interest.

Outside the surf lifesaving club building interpretative signs explain how the landscape was shaped and the role of George Coppins in creating this park. Others describe the Indigenous presence in this area, and the seaside visitors in the 1860s.

Whilst here, walk the highly-rated Coppins Track to Jubilee Point and back, allowing 45 minutes. From the car park take the signposted track. When you meet the T-intersection, detour left about 50 metres to see part of the Portsea-Sorrento Artists' Trail display of an 1871 oil painting of the area. Return to the T-intersection and continue the walk, looking out for the numbered markers along the track that highlight significant views, sites or vegetation types. Information about the Coppins Track can be found here: http://parkweb.vic.gov.au/\_\_data/assets/pdf\_file/0006/524508/Park-note-Mornington-Peninsula-NP-Coppins-Track.pdf. As you walk, listen and look for the small birds that live along this cliff top. Continue walking along the track, through the dunes before arriving at St Pauls Beach. Cautionary signs warn of tides and falling rocks at St Pauls Beach, so stay on the boardwalk and from there observe the work of wind and waves – rock platforms, rock pools, arches, stacks, caves. Keep a keen lookout for wading birds on the rocks. Continue to Jubilee Point for further panoramic views and evidence of weed infestations in the park. Return on the same route to the car park.

Time can also be spent on the Sorrento Ocean Beach itself, adjacent to the car park. A walk along the sand will reveal the cliff landscape and to the west rock pools can be explored at low tide. This is a popular beach so expect to see walkers, photographers, snorkelers, surfers, fishermen and other users of the ocean. Allow 20 minutes.

Additional studies of the Sorrento area can be included in the field trip to fulfil more of the curriculum descriptors for history – for example, the site of the original settlement in Victoria and Point Nepean fortifications.

#### Cape Schanck

Cape Schanck offers a range of geographic, historic and biological experiences along this important coastline. Viewed from the top of the boardwalk, the cliff landscape is dramatic. Flinders appears in the distance and the sandy beach of Bushrangers Bay contrasts with the cliff height and the worn black volcanic pebble beaches below. The view of the peninsula itself shows the exposure of the ancient volcanic rock overlain with more recent limestone deposits. The impact of wind and waves can be contrasted either side of the cape – to the west, strong waves pound the cape; to the east calmer waves change the landscape and habitat for wildlife. The boardwalk allows access to the black pebble beach, its rock pools and the awesome view of the surrounding cliffs. Allow 45 minutes for walking the boardwalk, but allow more time for the many learning experiences that can be undertaken in this environment.

Since the early 1980s, the Victorian Government has devoted resources to protecting the cape and improving visitor facilities. Eroded areas have been thatched for protection and revegetated with local plants, and timber steps and boardwalks built to provide access to the beach and rock platform.

On return to the car park a short walk leads to the lighthouse built from local limestone. The historic importance of this working lighthouse dates to 1859 and the surrounding area has a cottage for the lighthouse keeper's family (now the museum). Access to the lighthouse and its museum must be arranged separately, but free admission is available at both places (http://parkweb.vic.gov.au/explore/parks/cape-schanck-lighthouse-reserve). Allow 15 minutes for walking.

#### **Flinders**

The township of Flinders is at the extreme eastern end of the Mornington Peninsula National Park. The long sandy beach can be viewed from the basalt cliff tops at West Head and very easy access to the rock pools in the protected Mushroom Reef Marine Sanctuary can be gained from Golf Links Road. At low tide, the ocean withdraws to expose a huge mushroom-shaped sandstone rock platform extending from the beach to the reef of ancient basalt on the ocean side.

This sanctuary is famous for the diversity of marine life which make it their home. When searching the rockpools, you can find many crabs, multi-coloured cushion seastars, numerous species of snails and delicate anemones. The seafloor is covered with canopy forming brown algae and patches of seagrass, which attract many species of fish such as morwongs, wrasse, cowfish and Victoria's marine emblem, the weedy sea dragon. If you're lucky you may be able to spot a black and white seastar. Allow 10 minutes for walking, but take your time exploring the beauty of the rock pools.

#### Baldry Crossing, Greens Bush

Baldry Crossing in Greens Bush is connected to the coastal park by a habitat corridor along Main Creek, which flows into the ocean at Bushrangers Bay. Its different remnant vegetation and wildlife species provide a contrast to those in the coastal areas. The Green family retained this area of bushland when clearing the land for farming in the late 1920s. A short circuit (allow 45 minutes) or a longer circuit (allow 1.5 hours) show variations in upper and lower storey vegetation. The short circuit takes you through eucalypt forests of peppermint, messmate and manna gum as the dominant over-storey species. The long circuit weaves

further into the forest. There are several creek crossings, and the green, moist fern gullies are a contrast to the drier forest. This site is excellent for studies of vegetation.

#### Learn and discover

# 1. Landscapes and landforms

Mornington Peninsula National Park has been identified as having geological and geomorphological significance. Mornington Peninsula National Park's main landform feature is the extensive coastline dominated by sand dunes, cliffs, headlands, wide shore platforms and nearshore reefs. From Point Nepean National Park to Gunnamatta, it consists mainly of Pleistocene dune limestone, forming high sand dunes covered with vegetation. Coastal outcrops of older volcanic basalts occur from Fingal and Cape Schanck to Flinders. The Cape Schanck area from Fingal Beach to Bushrangers Bay is a relatively undisturbed area with many significant geological features. These include Angel Cave, which is of State significance, coastal cliffs, basalt shore platforms and the trace of Selwyn Fault. Selwyn Fault remains active today, generating occasional minor tectonic plate movements – the last severe tremor was in 1932. Long ago, Cape Schanck was thrust up.

The spectacular scenery and abrupt basalt stacks that characterise the eastern portion of Mornington Peninsula National Park are a result of millions of years of geological process. If you were here 60 million years ago, you'd be at least knee deep in molten lava. Lava flowing from vents in the ground cooled to form basalt – a hard, bluish-black rock. As it cooled it formed a regular pattern of joints, resulting in the tall hexagonal columns you can see today. In some areas, the lava only filled creek valleys, but at Cape Schanck it covered the area to a great depth. This feature is best appreciated when viewing the surrounding high cliffs from below. The more resistant basalt has survived erosion from relentless waves and wind, to form massive rock stacks and headlands such as Pulpit Rock.

The sand dunes in the western portion of Mornington Peninsula National Park developed 5000–10 000 years ago. At that time, winds blew enormous quantities of sand to create the local landscape. Later milder, wetter climates encouraged a diversity of plants to cover the sand dunes. The soft sandstone actively recedes under direct attack from wave action and winds; a relentless process that people can do little to prevent. Along the extensive sandy shores, sand is shifted continuously by the dynamic energy striking it, sometimes accumulating on the foredune, later to be cut into a small cliff by a high tide. If you visit the beach frequently, this process can be seen to move along the beach over time, forming small crescent-shaped shorelines.

### 2. Water in the landscape

Waves have a most dramatic impact on the Mornington Peninsula National Park. The wave intensity and direction, combined with the landscape of volcanic rock and limestone, has shaped this coastline. Strong, erosional waves have carved into the volcanic rock creating cliffs, stacks, rock platforms and rock pools. During high tides, waves scour softer depressions in rock platforms and as the depressions get deeper, rocks and sand are caught in these newly formed holes and are churned around. Gradually the holes become bigger and deeper. As the tide recedes water is held in these pools trapping marine animals until the next tide. The rock pools contain a range of species. Meanwhile, eroded particles are transported along the coastline to form long, sandy crescent beaches.

Climate change is having an impact on the marine life and changing coastal areas. The timing of Antarctic seabird breeding and peak migration dates are shifting. Tropical and temperate phytoplankton are moving southwards off eastern Australia.

## 3. People on the land

The area now known as the Mornington Peninsula is situated within the traditional land of the Bunurong people. Mornington Peninsula National Park has extensive shell middens; reminders of Aboriginal people's use of the coastline for thousands of years as a source of food. Stone artefacts occur at some sites, sometimes in large numbers. The Mornington Peninsula National Park contains a wide range and large number of Aboriginal archaeological sites with high scientific, cultural and educational significance. The density of sites in the coastal zone is among the highest recorded in Victoria, and many are protected by legislation.

The original forest areas close to the coast provided refuge for two notorious bushrangers, William Bradley and Patrick Connor, who escaped a convict settlement in Tasmania. In 1853 the pair forced their way aboard the boat *Sophia* for the trip across Bass Strait and were rowed ashore near Cape Schanck by two crewmen, who along with their rowboat, were never seen again. Hence the name of Bushrangers Bay.

In the mid-1800s lime burning kilns used the she-oak trees to burn the limestone. Today there are not many of the trees left. Lime burning was the process of converting limestone to quicklime which, by adding water, would become slaked lime. This could be used in plaster and mortar as seen at Cape Schanck Lighthouse. Lime kilns can still be found in the area, including two that are inaccessible within the national park.

Cape Schanck Lighthouse, opened in 1859, to assist the movement of ships through Bass Strait. Today it remains a working lighthouse and forms the eastern point of a triangle of lights for the busiest maritime area of Bass Strait. Cape Otway on the west coast and Cape Wickham on King Island are the other points of the triangle.

Until the 1970s, the Cape Schanck area suffered from overuse. Unrestricted vehicle and foot access was hastening erosion and facilities were inadequate when the former National Parks Service began to manage the area as part of the Cape Schanck Coastal Park. As urban growth continues and the demand for recreational space increases, the coastal landscapes are particularly sensitive to visual intrusions because of the sparse vegetation, long distance visibility and proximity to residential and other developments, especially golf courses. Information about the history of Mornington Peninsula National Park can be found here https://nepeanhistoricalsociety.asn.au/category/history/.

Today, as the busiest national park in Victoria (with most visitors), rangers have an important role in ensuring the park stays healthy. With excellent access from Melbourne, the majority of visitors come for recreational purposes. The areas that have car parks and paths are there for a reason: that is where rangers would like people to be. There are very sensitive areas that Parks Victoria do not want trampled or damaged.

Bunurong people continue to live, practice and strengthen their culture on the Mornington Peninsula. The Bunurong Land Council Aboriginal Corporation is a Registered Aboriginal Party, representing the traditional owners of the area. They ensure that Bunurong culture and connection to place is maintained into the future.

# 4. A unique ecosystem

Evidence of life long ago has been found along the coastline. Palaeontologists have discovered pieces of bone and a skull, jawbone and teeth of a fossil specimen, the rare Zyomaturus that lived possibly 2.6 million years ago. These large marsupials lived in groups. They had huge cheekbones and a big rubbery nose.

The known native fauna of the Park comprises 32 mammals, 167 birds, 22 reptiles, seven amphibians and two freshwater fish. Regionally important species include the whitefooted dunnart, long-nosed bandicoot, black wallaby, singing honeyeater, spiny-cheeked honeyeater and blue-winged parrot. Special management and monitoring of the hooded plover is undertaken along the ocean beaches in partnership with volunteers.

The coastal vegetation is generally stunted as a result of strong winds and the wind-blown salt that burns off the leaves. The larger shrubs include coast tea-tree, moonah and coast beard-heath grow freely to their maximum height in the shelter of the dune valleys. In some exposed sites, the moonah has adapted to the prevailing weather. They form gnarled, twisted trunks supporting a dense, sculptured canopy of thick leaves which deflect the salt winds, thereby protecting both plants and dunes.

Not all plants are welcome in this habitat – three South African species have become problematic invaders. In winter and spring, smilax asparagus, a smooth-leaved climbing plant, smothers the native understorey. You may also spot myrtle-leaf milkwort with its purple pea-like flowers and African boxthorn with very sharp spines. These introduced weeds were brought by early settlers who came via South Africa.

Consider using Museums Victoria's Victorian Field Guide app to help identify species you might find in the park, and the iNaturalist or Climatewatch apps to record what you find.

# 5. Revegetation and rejuvenation

The Mornington Peninsula National Park has been largely cleared of native vegetation. It contains nine species considered rare or threatened in Victoria and over 40 species that are rare or uncommon on the Mornington Peninsula. Greens Bush contains the largest and most important areas of native vegetation remaining on the peninsula.

Many vegetation communities, particularly coastal grassy forest, coast banksia woodland and sand heathland, have been greatly depleted since European settlement and are of particular conservation significance. Parts of the Flinders coastal section of the park have been depleted of native vegetation principally due to a long history of grazing.

Australian plants have a long history of exposure to intermittent fires and many species have developed adaptations to aid survival. The seed of acacias can lie dormant for many years until fire triggers germination. Many banksias, she-oaks and hakeas have tough, woody fruit which open to release seeds after a fire. The growth of the young seedlings is slow at first and it is several years before the plants flower and produce seed. Thus, frequent fires could eliminate some native species, which is why fires are not permitted in the Mornington Peninsula National Park.

Fire is now very uncommon in the coastal areas of the park. The narrowness of much of the coastal section of the park and the proximity of adjacent houses and farms means that there is generally no practical and safe way to use fire as an ecological management tool or for fuel reduction in such areas. The ecological effects of vegetation management without the use of fire requires research. Studies in Greens Bush show that fires over the last 120 years occurred at a frequency of about one in every decade, but there have been no fires since the area became park. Controlled burns are managed in this area of the park.

After a fire, the soil is exposed briefly to the wind and rain. The quick regrowth of native grasses covers the bare soil and prevents erosion. The area along the cliff-top was last burnt in 1975. Many people think Mornington Peninsula National Park is a fire hazard but coastal shrub is different to inland scrub – it's not as likely to burn because it has less fuel than the inland areas.

# 6. Managing the park today

Different pressures threaten the ecological value of Mornington Peninsula National Park. The major threats to plants and wildlife include introduced plant species and introduced pest animals such as foxes, rabbits and feral cats. Park rangers have a management plan in place to address these issues within the park boundaries. When introduced or non-native plant species occur in urban developments close to park boundaries, seeds can be carried by wind, birds, tyre treads and the soles of shoes and end up in areas of native vegetation.

The long-term effect of invasion of non-native species into the parkland is the possible extinction of remnant bushland species, and of wildlife species that depend on native plants for their survival. Additionally, invasion of non-native species creates a visually unattractive landscape as these plants spread throughout the park.

Over 150 non-indigenous plant species occur in the park and many are serious environmental weeds. Much of the narrow coastal area supports populations of environmental weeds that are widespread and very difficult to control. In some areas, adjacent garden plantings provide a constant source of weeds. Some plant nurseries sell a number of these 'garden escapees'. Pine wildings are spreading in areas adjacent to the Pines Picnic Area and in other localised areas next to boundaries. Ragwort is controlled in accordance with the Ragwort Management Plan and considerable resources are applied within the park. Cinnamon Fungus occurs in Greens Bush, particularly in the northern parts.

The coastal dunes and cliffs are susceptible to erosion from a range of factors including natural processes and recreational pressures. Inappropriate access into the park and off-track walking has led to the development of a network of undesirable tracks in many dune and cliff areas in the park. Despite the ad-hoc track network, natural dune blow-outs appear to have decreased since stabilisation and revegetation works have occurred. Natural dune blow-outs are an integral part of coastal processes. Marram grass has been extensively used for stabilisation works during the 1970s and early 1980s. While dune areas have been successfully stabilised, the use of marram grass may have altered natural coastal processes and decreased habitat suitability for the hooded plover.

The maintenance and improvement of visitor facilities is another big part of park management. National parks are for the enjoyment and education of people, as well as to protect the natural and cultural values found within them, so it's important to provide and maintain car parking, toilets, picnic tables and other facilities to support visits to our parks.

Greens Bush supports the largest population of eastern grey kangaroos on the Mornington Peninsula. This population moves freely in and out of the park and pasture areas within the park and surrounding properties provide grazing areas. An integrated approach to kangaroo management across public and private land is required and development of a management strategy is primarily the responsibility of Environment Victoria.

Mornington Peninsula National Park has many issues with introduced wild species, but also domestic species – cats should be kept indoors and dogs are no longer welcome on these beaches (see case study below).

Case Study: When the Mornington Peninsula National Park was created, dogs were still allowed in the national park. It was decided to still allow dogs on the beaches, but only between sunrise and 9am and only on lead. You will notice the signs at all entry points to the coastal park indicating that dogs are not allowed even in cars. The Mornington Peninsula National Park is home to the highly sensitive hooded plover which is on the endangered list. Many attempts were made to save the birds from being endangered, but a study found that a key impact on the birds was dogs on the beach. Unfortunately, beach users were not abiding by the rules, which then led to a total ban on dogs on beaches in the Mornington Peninsula National Park back beaches at all times in 2016. Students could devise a plan on how to communicate with beach users why dogs are should not be allowed on the beach and create strategies to make beach users follow these rules.

### **Discover and reflect**

You might like to enhance your excursion with some activities and inquiries that help students record and extend their learning back into the classroom. You might like to complete one or more of the following:

- 1. Take photos to create an annotated photolog or poster of your field trip to share with classmates. You could use social media to share it with friends.
- 2. Create a short video that helps tell about one significant aspect of Mornington Peninsula National Park.
- 3. Map your field trip using software such as Scribblemaps or Tour Builder, annotating what you've learned at various points.
- 4. Create a sound map of various points around the park, taking a series of 30-second audio recordings, referenced back to points on a map. Students can also record their audio observations on paper, using lines made from a central point to indicate the direction, type and frequency of sounds they hear and whether it adds or detracts from the environment.
- 5. Discuss why it's important to protect cultural heritage such as shell middens and consider a range of different approaches land managers could adopt to care for and conserve this heritage.
- 6. Consider how the geographic features of this landscape may have influenced Aboriginal people's use management practices related to the land and sea.
- 7. From one of the many vantage points along the coastline, describe the coastal landscape of the Mornington Peninsula National Park. Include visibility, rock types and landscape formation.
- 8. Research the formation of limestone. How does its formation tell us about the movements of the land and climates long ago?
- 9. With the aid of an aerial image of a section of the coastline (e.g. from Google Earth), use technology to model how the coast may have looked 20 000 years ago. Be prepared to justify your ideas.
- 10. Narrow patches of habitat are not ideal for nature conservation, but when areas are joined together as habitat corridors, plant and animal species can thrive. Explain how Mornington Peninsula National Park overcomes its restricted coastal environment to be a significant conservation area. Include a consideration of Greens Bush in your answer.
- 11. The coastal vegetation is quite different to more inland vegetation. Compare the vegetation between the coastline and either Greens Bush or vegetation near your school. Consider aspects such as species, height, upper storey/lowers storey plants, impact of climate, weeds, revegetation and use of fire.

- 12. It is important to conserve the remains of the past. Undertake a detailed study of the importance of the Sorrento Ocean Beach in the 1800s and/or the significance to shipping of the Cape Schanck lighthouse now and then.
- 13. European settlement changed the landscape along this coast. Use Google Earth to discover the external pressures on Mornington Peninsula National Park. Put together a series of aerial images with labels such as urban growth, water tanks, small acreage properties, farmland, golf courses, resort developments, sand dunes exposed to wind. Include in each annotation a brief description of the pressure on the park.
- 14. Study the recreational facilities provided throughout the park. Assess whether the facilities cope well with the number of visitors on week days/ weekends and in summer/winter. Is access for the disabled adequate?
- 15. Discuss the role national parks play in connecting people to their environment, or influencing peoples' personal relationships to nature.
- 16. Become a citizen scientist and help land managers track the species found in the park. Use the iNaturalist app to contribute to the park's species list.
- 17. Download PDF Avenza Maps App and a free copy of Mornington Peninsula National Park to record your fieldwork / excursion and upload photos and notes.

#### **Get active**

Contact the ParkConnect team if you would like to get your students involved in some hands-on volunteer activities in Mornington Peninsula National Park.

Parks Victoria respectfully acknowledges the Traditional Owners of what is now known as Victoria. For many thousands of years they have lived in harmony with, and carefully managed the Country for which they have a deep spiritual connection. Contemporary Aboriginal people are proud of their ancestry and in addition to their inherent rights, they have spiritual and cultural obligations to ensure that their ancestral land and culture is managed responsibly and appropriately.