



CALM Bush Rangers Annual Report 2005



Department of
Environment and Conservation

“The quality of citizenship displayed by young people and adult volunteers in the Bush Rangers program contributed to its success in the 2005 calendar year.

The program led to personal growth among Bush Rangers and volunteers, strengthened community and departmental partnerships, and benefited the environment. As a host organisation, the Department of Conservation and Land Management (CALM)* gave exceptional biodiversity conservation experiences to a statewide network of highly committed participants.”



Bronwyn Humphreys
Senior Project Officer
Bush Rangers
Western Australia

Photos – Lynette Wilkinson, Gary Paul, Nathan de Bruyn, Andrew Paul, Kevin Watson, Simon Cox, Tracy Myers, *The West Australian* newspaper, Tracey Corps and Bronwyn Humphreys

* The Department of Conservation and Land Management merged with the Department of Environment on 1 July 2006 to form the Department of Environment and Conservation (DEC).

CALM Bush Rangers Annual Report 2005

Engaging communities with their youth in biodiversity conservation

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Southern River College Bush Ranger unit rehabilitate a creek line of the Hillside Farm in Gosnells.

Summary of achievements

The Bush Rangers program, as part of Cadets WA, has given more than 7000 young people opportunities to learn about conservation biodiversity and develop academically and personally.

This year, Bush Rangers' volunteers contributed more than 280,000 hours to projects through team and leadership projects. Importantly, the program provided the cadets with academic credits through a national accreditation of competencies and the completion of certificates in Conservation and Land Management. Furthermore, their work is recognised in the formal education system on the Western Australian Certificate of Education (WACE).

Conservation community service activities carried out in 2005 ranged from assisting national park rangers in the gorges of Karijini National Park to de-fencing the Shark Bay World Heritage Area. Cadets chose to complete important work on Ramsar wetlands, planted wildlife corridors for Carnaby's cockatoos in the wheatbelt, monitored native animal recovery from fox baiting and created homes for birds, bats and possums.

Bush Rangers communicated their accomplishments in a variety of personally meaningful ways. They presented their Bush Rangers unit's accomplishments at major State events, including the Perth Royal Show, and featured on television and radio programs, in newspapers, school newsletters and magazines, and on intranet and internet sites.

Since the inception of the program in 1998, Bush Rangers cadets have played an increasingly influential part in shaping and personalising their units. In 2005, senior cadets took on a range of roles that assisted with the success of their unit. They helped to organise expeditions and excursions, lead the unit in activities, wrote articles, maintained a website and represented their unit and the program at functions. Senior cadets are continually

returning in their adulthood as volunteer instructors.

The dedication of the cadets is demonstrated on a daily basis and a series of reward events have been developed to formally recognise their efforts. Reward events in 2005 included a chance to take part in CALM's Fire Management Services fire control burn camp at Dwellingup, CALM's Science Division's native animal monitoring at Perup Nature Reserve, its Geographic Information System (GIS) section's conservation project support, the Shark Bay World Heritage Area experience, the Bush Ranger's Leeuwin Ocean Adventure Leadership sail and regional camps at Norseman in the Goldfields, Icy Creek in the south-west and in Perth.

More than 60 CALM staff members ensured that units were linked to meaningful projects on government estate and private land. Departmental staff and local community members sat on Bush Rangers management committees and helped units with their camps and expeditions.

During the year, some units were recognised for their accomplishments by their schools and the wider community. More formally, they were named finalists in the 2005 WA Youth Award and WA Landcare Award.

The Bush Rangers program has created a positive change in local communities and the young people involved in the program. CALM staff members report that they enjoy sharing their expertise with committed young people of the program. Staff members have also seen the value of the Bush Rangers program as a resource and have asked units to assist them achieve their community involvement and local works objectives.

Local community members have reported their positive experiences of linking with Bush Rangers as part of a shared conservation purpose. The young people report that being

involved in the Bush Rangers program has elevated their confidence, which they hadn't experienced in themselves or their peers. The confidence and shared conservation experiences gained each year are attributed to providing these young people with a strong sense of purpose and belonging.

By the end of 2005, the strength and credentials of the program were such that Cadets WA approved a 25 per cent increase in the number of Bush Rangers units across WA to start in 2006. This includes remote community schools, another education support school as well as schools from the independent, catholic and government sector. The successful partnership between CALM and bodies such as Cadets WA and the education sector has accumulated a monetary and in-kind wealth for exceptional opportunities for young people, exclusive to WA.



Newman Senior High School Bush Rangers assisted park rangers maintain trails in Karljini National Park.



Rossmoyne Senior High School Bush Rangers have undertaken rehabilitation at Bull Creek since 1998. Photo courtesy of *The West Australian*.

Background

Since its inception in 1998, CALM's Bush Rangers program has been a host organisation for Cadets WA. The program fosters opportunities to gain competence and confidence in life skills such as teamwork and leadership in the context of a biodiversity conservation ethic.

There are 37 schools in 34 Bush Ranger units in the following CALM regions:

Goldfields – Goldfields Baptist College; Coolgardie CAPS

Midwest – Kalbarri District High School, Pia Wadjarri Remote Community School, Phoenix West College, Christian Brothers Agricultural School

Pilbara – Newman Senior High School

South Coast – Norseman District High School, Wongutha CAPS, Esperance Senior High School

South West – Bunbury Cathedral Grammar School (incorporating Bunbury Catholic College), Newton Moore Senior High School, Geographe Education Support School

Swan – John Septimus Roe Anglican Community School, Duncraig Senior High School, Ellenbrook Christian College, Mt Lawley Senior High School, City Beach School, Coodanup Community College, Chisholm Catholic College, Dale Christian College, Emmanuel Catholic College, John Forrest Senior High School, Mundaring Christian School, Northam Senior High School, Roleystone District High School, Rossmoyne Senior High School, Thornlie Christian College, Warnbro Community College, Waroona District High School, Gosnells Senior High (now Southern River College)

Warren – Manjimup Community (including Manjimup Senior High School, Kiernan Catholic College)

Wheatbelt – Katanning Senior High School, Merredin Senior High School

Two thirds of the Bush Rangers units are from government schools, 16 are in rural areas and 13 are in the Perth metropolitan area.

Year	Government school of isolated and distance education	Government senior high schools	Government district high schools	Education support	Catholic	Independent	Remote community school	Total
1998	-	2	-	-	-	-	-	2
1999	-	7	1	-	2	1	-	11
2000	1	10	5	-	3	3	-	21
2001	1	10	9	-	5	5	-	29
2002	-	13	6	-	4	5	-	28
2003	-	13	5	-	3	6	-	27
2004	-	13	5	1	3	7	-	29
2005	1	13	6	1	4	10	1	36

Table 1.1 Distribution of Bush Rangers units across the education sectors.

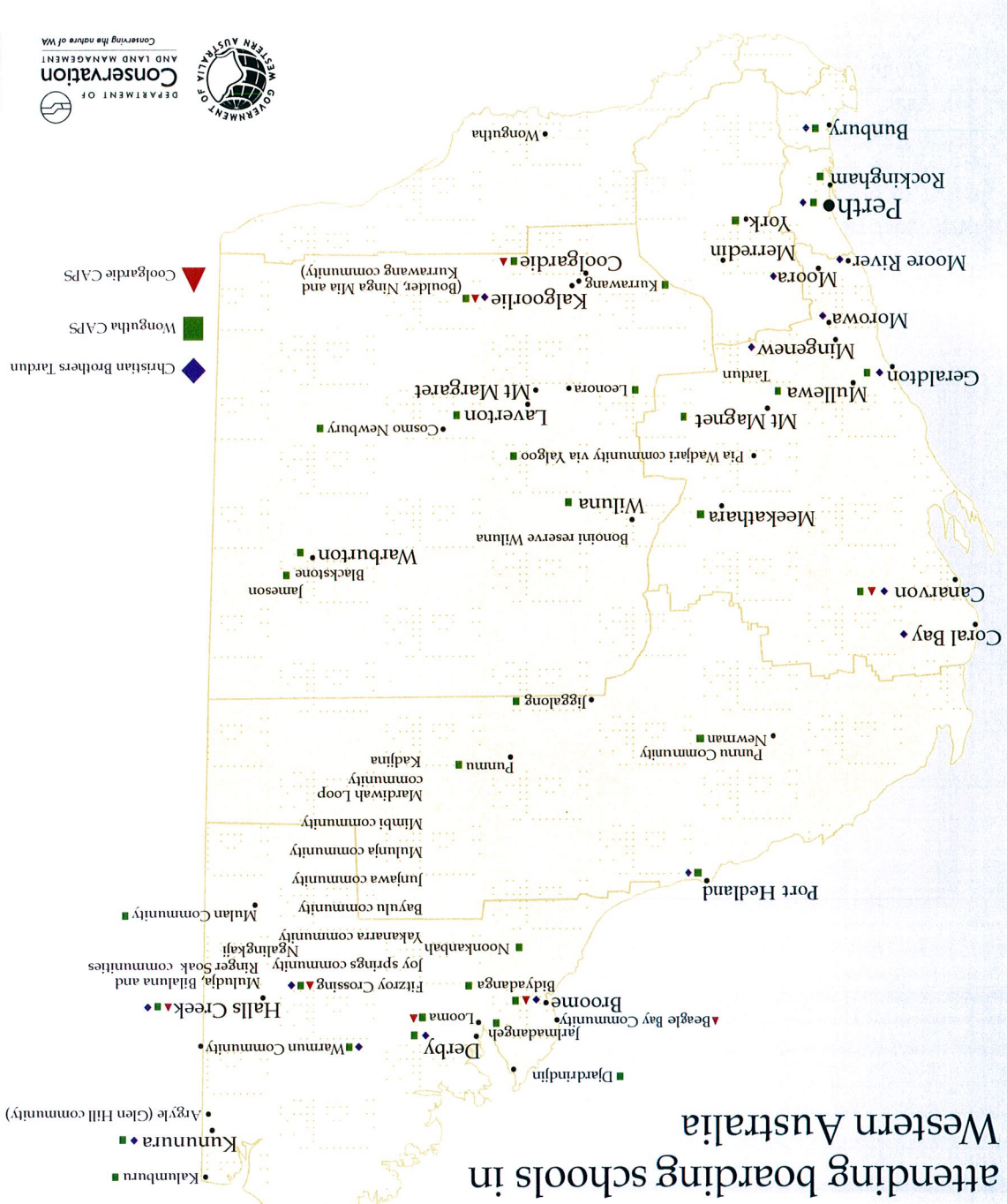
The number of school communities that want to partner with the program has continued to grow. Cadets WA has approved a 25 per cent increase in the number of approved units to begin in 2006. New units were established at the Albany Education Support Centre, Bunbury Catholic College, Canning Vale College, Clontarf Aboriginal College, Jerramungup District High School, Kolbe Catholic College, Meekatharra District High School, Yilga Jinnah Remote Community School, Mercy Catholic College and Wagin District High School.

Bush Rangers come from all bioregions of the State. The following two maps illustrate the location of the units as well as the location of the communities the Bush Rangers who attend boarding school come from.

2005 Location of CALM Bush Ranger Units in Western Australia



2005 Distribution of CALM Bush Rangers attending boarding schools in Western Australia



Conserving the nature of WA

2005-06-01

Our role as a host organisation

CALM is a host organisation within the Cadets WA program and invites membership from secondary school-aged people across WA. The Bush Rangers program is one of the ways the agency achieves its vision of working with the community to conserve the nature of WA. This is achieved in all bioregions and with local community participation.

The program has enabled the messages of conservation to reach a cross section of the WA community, either by being directly involved in the Bush Rangers program or by the effective ways the young Bush Rangers let the community know about their work.

The diverse and comprehensive range of opportunities offered to help participants achieve their potential in life skill developments, conservation volunteering and/or careers includes:

- engaging local communities with their youth in biodiversity conservation;
- providing reward experiences for committed young people;
- providing pathways for nationally accredited training that is recognised on cadets' WACE;
- maintaining a system of awards that acknowledges both cadets and adult volunteers;
- effectively engaging all Bush Rangers units in communicating about the work they do;
- providing work experience and pathways for cadets who wish to pursue a career in conservation;
- providing professional development for the adult volunteers at the annual in-service course as well as providing opportunities for them to experience the way CALM works in different divisions; and
- encouraging more than 60 CALM staff members to partner with Bush Ranger units and embrace the advantages brought by these partnerships.



Wongutha CAPS Bush Rangers at Cape Le Grand National Park installing fluorescent markers on the trail to Frenchman's Peak.

Bush Rangers reward experiences

The reward experiences that were offered in 2005 by the Bush Rangers program display the richness of the program and depth of commitment by a good cross section of CALM staff. These practical reward experiences included:

- a Fire Management Services prescribed burn at Dwellingup;
- monitoring the effect of fox baiting on native animal populations at Perup nature reserve with the Science Division;
- being part of the Geographic Information Systems training and conservation project support;
- taking an expedition to the Shark Bay World Heritage Area;
- taking part in the week-long Bush Ranger Lecurewin Ocean Adventure Leadership sailing trip;
- being involved in community service at the Perth Royal Show's *Landcare Exhibit* display; and
- taking part in regional camps at Bromus Day in the Goldfields/Esperance Region, Icy Creek in the South West Region and Mirrabooka in the Perth metropolitan region.

Cadets then communicated the messages about biodiversity conservation community service to the other people in their Bush Rangers unit and the school community.

Cadets also communicated within their newly developed social networks, and kept in contact with members of other units throughout WA. They maintained contact by email and even caught up after the events. Cadets reported that these experiences helped them to gain confidence and helped to create or confirm volunteer and career aspirations.

Fire Management Services control burn at Dwellingup

Twelve of the most committed cadets from six units completed the nationally accredited Basic Bush Fire Awareness course at Dwellingup in 2005. This is the seventh year this reward has been offered to the program by CALM's Fire Management Services section. Around 100 cadets and instructors have enjoyed the two-day event, which included a fire theory and practical test, activities in health and fitness for the fire line and planning and conducting a prescribed burn at the Forest Heritage Centre.

Monitoring the effect of fox baiting on native animal populations at Perup

Nature Reserve with CALM's Science Division

Since 1999, 140 cadets and instructors have experienced hands-on field monitoring of the effects of fox baiting on native animal populations at the Perup Nature Reserve by CALM's Science Division staff. Baiting traps, recording information, using GPS units, completing safe and effective native animal handling and analysing results are all part of these spring and autumn events provided by the Science Division staff each year.

The Geographic Information Systems (GIS) section, GIS training and conservation project support

CALM's GIS section has a strong partnership with the Bush Rangers program. Having gained an enormous in-kind sponsorship from software company Environmental Systems Research Institute (ESRI) for free licenses for ArcView software for all participating cadets and instructors, CALM's GIS section has developed and implemented training programs and supplied resource data to all Bush Rangers units. This reward is designed to assist cadets who are ready, and able, to use this application for communicating and recording their projects. In 2005 projects assisted by the GIS section included mapping the nesting boxes at the

Hillside Farm in Gosnells and mapping the Science Division's Perup trapping data.

Shark Bay World Heritage Area expedition

Each April and October, CALM's staff in CALM's Science and Parks and Visitor Services divisions in the Shark Bay World Heritage Area have provided Bush Rangers with unique practical experience in bilby and other rare native animal breeding programs. Cadets also assisted national park staff with manual work and helped feed the dolphins at Monkey Mia. This reward combined the exceptional with the every-day work of staff in these areas. Now in its fourth year, 240 cadets and instructors have taken part in this reward.



Mt Lawley Senior High School Bush Rangers constructing pit traps to monitor native animals at the Shark Bay World Heritage Area.

Bush Rangers/Leeuwin Ocean Adventure Leadership sail

In 2005, 42 cadets left Perth on the Bush Rangers/Leeuwin Ocean Adventure Leadership sail for a week-long reward. Now in its seventh year, 300 of our most dedicated cadets have completed this reward.

Helping with the Perth Royal Show's Landcare Exhibit

In 2005, 140 Bush Rangers assisted with the conservation displays at the Perth Royal Show by undertaking a range of tasks, including making conservation kites with children, tallying visitor numbers, helping visitors make their own conservation badge, working with mascot Captain Cleanup on the main oval and providing general maintenance to the display area. Bush Rangers cadets have offered this community service for the past seven years and have contributed an estimated 5000 volunteer hours.

Regional camp – Goldfields/Esperance units at Bromus Dam

Wongutha CAPS hosted this regional camp with 80 Bush Rangers experiencing an exceptional reward camp at Bromus Dam, near Norseman. Cadets increased their competence in minimal-impact practice, bushcraft and survival, bush camp skills and first aid scenarios, and took part in a team building activities.

Regional camp – South West units at Icy Creek

Waroona District High School and CALM's Dwellingup Work Centre played host to the 2005 South West Region camp held at Icy Creek. Seven units in the South West Region were given the opportunity to develop practical experience with fire suppressants and equipment. The 'Dwelfed' fire mobile kitchen

demonstrated an important role in fire management – catering for hundreds of people on the fire line. An evening of ‘X factor’ enabled Bush Rangers to appreciate each other’s creative expression.

Regional camp – Mirrabooka in Perth’s metropolitan region

John Septimus Roe Anglican Community School planned and implemented the 2005 regional camp. Metropolitan units completed a clean up of the conservation area adjacent to the school as their contribution to the local environment. Learning about safety in nature was another exercise made fun as cadets competed to navigate a bushland course at John Septimus Roe Anglican Community School while discovering the answers to conservation clues. Senior rangers organised many of the team building events for this camp.

Conservation and other community service – our collective role

In 2005, the 34 Bush Rangers units engaged in a variety of conservation and other community service activities at their school, in their local community and on their expeditions.

These projects were undertaken in and on marine and terrestrial areas managed by CALM and privately owned estates. More than 60 CALM staff and 120 community groups and agencies assisted the units to achieve their objectives. In 2005, 1353 Bush Rangers and instructors contributed 281,964 volunteer hours under the program.

The types of projects undertaken were determined by what the units were interested in, practical and logistical considerations and the availability of human and other resources. This year it included working with the Rubibi people in Broome on their interpretation trail, planting habitat and food for Carnaby's cockatoos, monitoring and handling chuditch and woylies as part of the fox baiting recovery project, monitoring malleefowl nests in the mid wheatbelt, completing rehabilitation work on local bush land, zoo food growing and collection, completing tasks at Shark Bay World Heritage Area and rock-wallaby surveys at Esperance and Merredin.



Southern River College Bush Rangers monitor macroinvertebrates in the creek on Hillside Farm in Gosnells.



Esperance Senior High School Bush Rangers assisted in the management of cultural sites at Cape Le Grand National Park.

Projects are highlighted in the following table to show the diversity of the projects conducted.

Bush Ranger Unit	Conservation and other community service projects undertaken	Community involvement
<p>Royal Aero Club School community CALM's Bunbury office CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Taking part in Junior Hawks Day • Conducting a biodiversity frog count • Constructing possum boxes • Planting wildlife corridors for the rare Carnaby's cockatoo • Conducting controlled burns with CALM • Seed collecting and propagation on school grounds • Surveying of native wildlife on school grounds • Conducting energy and waste audits • Local reserve management • Removing rubbish, replanting and weeding at Site 60 (Hastie Road) 	<p>Bunbury Cathedral Grammar School</p>
<p>Eric Singleton Bird Sanctuary Bayswater Integrated Catchment Management Ribbons of Blue Friends of Baigup CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Mulching, planting, bagging, weeding and conducting flora and macro-invertebrate surveys at various sites, including the Chisholm stream (our little native area at the school), the Eric Singleton Bird Sanctuary in Bayswater, Hinds Reserve on the Swan River and a wetland area behind Pinetec in Bassendean • Removing weeds at Wharnciff Mill as part of the Margaret River camp with CALM officers, and boardwalk oiling at Hamelin Bay • Working with CALM officers to remove fences, clean out native animal pens, trap native animals and other activities at Monkey Mia at the Shark Bay reward camp • Conducting work with Bayswater Integrated Catchment Management and Ribbons of Blue, including growing a small number of indigenous plants collected from the surrounding local areas at our nursery at the school • Learning about bush survival, and achieving other outcomes as part of a visit to The Hills Forest Discovery Centre • Learning about CALM's <i>Western Shield</i> program and the need to look after native flora and fauna 	<p>Chisholm College</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
Coodanup Community College	<ul style="list-style-type: none"> • Team building and fire management at Icy Creek Camp • Island conservation at Rottnest Reward Camp • Installing nesting boxes, removing rubbish and managing the school bush block • Learning bushcraft and survival skills • Working safely in the bush • Learning basic First Aid 	CALM Dwellingup office Rottnest Island Authority Coodanup Community College CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division
Coolgardie Christian and Parent School	<ul style="list-style-type: none"> • Team building at the bushcraft and survival camp • Planting and installing bird nesting boxes as part of the NARA project • Designing and planting a frog pond • Working safely in nature conducted at school • Taking part in the Coolgardie tree measuring day • Studying the effects of fire on biodiversity in Coolgardie • Measuring biodiversity on the Holland Track and the Emily Ann Mine • Conducting trapping and flora surveys for pigmy possums, pythons, lizards, orchids and quandong 	Nature and Agriculture Rehabilitation Association School community Wilderness Society CALM Kalgoorlie District CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division
City Beach School	<ul style="list-style-type: none"> • Beach clean up and rubbish collection within dunes at City Beach • Beach and dune clean up as part of the Ern Halliday Camp • Camping excursion at the Ern Halliday site at Sorrento, with activities including teamwork events such as navigation, abseiling, climbing and roping • Weeding, planting and mulching at Bold Park • Learning about safety issues for camp preparation • Camping excursion in CALM's Perth Hills district, Mundaring • Maintaining equipment in storage • Learning about and using navigation, roping skills, weather walking and cooperation • Collecting rubbish with the <i>Leave No Trace</i> community • Learning Basic First Aid survival skills • Taking part in the Leeuwin Ocean Adventure Leadership sail 	Coast Care group Bold Park Ern Halliday Camp Leeuwin Ocean Adventure Leadership sail CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division CALM's Perth Hills district Department of Sport and Recreation
Dale Christian College	<ul style="list-style-type: none"> • Pre conservation work 	School community
Duncraig Senior High School	<ul style="list-style-type: none"> • Participating in Clean Up Australia Day • Weeding, tree planting, removing rubbish and other bushland management activities in the school's adjacent bushland • Weeding, tree planting and removing rubbish removal at Duncraig School bushland • Taking part in World Environment Day activities • Assisting with the Perth Royal Show • Sponsoring children in Africa and Asia with cadet pledges 	World Vision World Environment team Friends of Lilburne/ Duncraig bushland Royal Agricultural Society of Western Australia Orienteering Association of WA CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
<p>Ellenbrook Christian College</p>	<ul style="list-style-type: none"> • Taking part in survival, navigating and camping activities at Whiteman Park • Cleaning up adjacent bush at the regional camp • Cleaning up Rottnest Island and enjoying its local nature • Taking part in an underwater photography competition with disposable cameras, learning water skills and being assessed • Taking part in ANZAC Day celebrations • Sailing and tying knots • Taking part in the Leeuwin Ocean Adventure Leadership sail • Taking part in the Shark Bay World Heritage Reward Camp 	<p>Armadales-Gosnells Landcare Group Cockburn City Council Royal Agricultural Society of Western Australia Red Cross Perth Zoo CALM's Regional Parks Unit Clontarf Aboriginal College Water Corporation – Southern Lakes Drainage Scheme Leeuwin Ocean Adventure Leadership sail Native Arc – Bibra Lake Naragebup Environment Centre Bruce Abbott (grass tree expert) CALM Fire, Bunbury CALM's Science Division CALM's Katanning office CALM's Manjimup office Katanning Bush Ranger Unit CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
<p>Emmanuel Catholic College</p>	<ul style="list-style-type: none"> • Successfully collecting and recycling more than 2000 kg of paper • Running a clean up competition on school grounds for Clean Up Australia Day • Maintaining a native garden at school for birds • Planting at Katanning for a wildlife corridor for the Carnaby's cockatoo • Weeding at the Naragebup Rockingham Regional Environment Centre • Assisting CALM at the Perth Royal Show Landcare Exhibit • Cleaning up Coogee beach • Taking part in the Red Cross street appeal • Harvesting termites for numbats at Perth Zoo • Developing a herbaria for school bushland • Night stalking at Yanchep National Park and Beellar Regional Park • Animal trapping with CALM's Science Division at Perup Nature Reserve • Taking part in the fire awareness camp with CALM's Fire Management Services • Manning a display at Gateway Shopping Centre about the Bush Rangers program 	<p>Armadales-Gosnells Landcare Group Cockburn City Council Royal Agricultural Society of Western Australia Red Cross Perth Zoo CALM's Regional Parks Unit Clontarf Aboriginal College Water Corporation – Southern Lakes Drainage Scheme Leeuwin Ocean Adventure Leadership sail Native Arc – Bibra Lake Naragebup Environment Centre Bruce Abbott (grass tree expert) CALM Fire, Bunbury CALM's Science Division CALM's Katanning office CALM's Manjimup office Katanning Bush Ranger Unit CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
Esperance Senior High School	<ul style="list-style-type: none"> • Fundraising • Taking students to West Beach area clean up as part of Clean Up Australia Day • Collecting pine cones for the elderly for kindling in the winter months at Helms Arboretum by Year 9 students • School recycling and purchasing more bins • Tree planting, reed pulling at Smith's Block and learning bush craft and survival skills at Cape Le Grand Unit camp • Laying grip rock at Cape Le Grand camp to reduce injury to visitors • Rock wallaby spotting • Taking part in a bridal creeper project 	<p>Clean Up Australia Day Committee CALM's Esperance district CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Geographe Education Support Centre	<ul style="list-style-type: none"> • Team building, gate keepers broom weeding and learning survival skills at Wharnclyff Mill • Propagating seed as part of an APACE visit • Taking part in events as part of Ribbons of Blue Award Day • Volunteering at an Iron Man competition • Planting Bridal creeper rust • Propagating at landcare nursery • Obtaining First Aid Basic Life Support Certificate • Obtaining an award from Geocatch • Planning, reporting to partners, surveying local residents, seed collecting, and propagating as part of a reserve project 	<p>Warden Centre, Margaret River Shire Australian Iron Man Association Landcare Community Nursery St John Ambulance Geocatch Ribbons of Blue Shire of Busselton CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Goldfields Baptist College	<ul style="list-style-type: none"> • Team building at Camp Burra Rocks • Creating nesting boxes for Kalgoorlie Arboretum • Identifying trees and correcting lack of signage at Kalgoorlie Arboretum • Making and distributing seed ball as part of Kalgoorlie landcare rehabilitation project • Taking part in the Leeuwin Ocean Adventure Leadership sail • Identifying shrubs and trees at school 	<p>Leeuwin Ocean Adventure Leadership sail School community Kalgoorlie Boulder Landcare Group CALM's Indigenous Heritage Unit CALM's Kalgoorlie district CALM's Strategic Development and Corporate Affairs Division</p>

Community involvement	Conservation and other community service projects undertaken	Bush Ranger unit
<p>Ribbons of Blue Armadale-Gosnells Landcare Group Kokendin Catchment Group Friends of Mary Carol Clean Up Australia Day Committee CALM's Bunbury office CALM's Science Division CALM's GIS section CALM's Corporate Services Division CALM's Strategic Development and Corporate Affairs Division CALM's Indigenous Heritage Unit</p>	<ul style="list-style-type: none"> Planting, mulch, weeding and monitoring the Mary Carol reserve park Native plant regeneration in the Kokendin Catchment Group for salinity action Creating and monitoring a wetland at Hillside Farm Planting native species for fauna usage at Hillside Farm Building and erecting bird nesting boxes Trapping, identifying, measuring and recording native fauna, birds and insects at Hillside Farm GPS recording and GIS mapping of birds and frog species at Hillside Farm Weeding of broom bush at Warncliffe CALM site Clean up Australia Day project at Huntingdale foreshore Taking part in a Fire Reward Camp Taking part in the Perup Reward Camp Hosting Newman Senior High School Bush Rangers for activities at Hillside Farm 	<p>Gosnells Senior High School</p>
<p>Eric Singleton Bird Sanctuary Bayswater Integrated Catchment Management Ribbons of Blue St John Ambulance Australian Red Cross City of Bayswater School community CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> Ongoing rehabilitation of the remnant bushland site Planting as part of Bayswater Integrated Catchment Management Logging and graphing data every 30 minutes, which is correlated with weather patterns affecting the air quality as part of Air Watch Maintenance painting of the bird hide at Eric Singleton Bird Sanctuary Water testing at Eric Singleton, Nora Hughes and Brown Lake for nutrients and biodiversity of macro-invertebrates Collecting approximately 45 kg of photocopy paper each week for recycling as part of Waste Watch Propagating seedlings in the shade house for planting Growing zoo feed in the permaculture garden Building earthworm pens to enable worms to continue to breed and consume waste from the school canteen Demolishing chook pens and re-establishing areas as paved areas with limestone fencing, which will be relocated back to protect the zoo feed and shade house from general access First Aid training Taking part in an Australia Day cleanup 	<p>John Forrest Senior High School</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
John Septimus Roe Anglican Community School	<ul style="list-style-type: none"> • Raising awareness and funds for disadvantaged youth through the Telethon Trek to Uluru via Warburton • Taking part in the Leeuwin Ocean Adventure Leadership sail • Bush cleanup and navigation as part of the regional camp • Undertaking conservation project in Koondoola with Friends of Koondoolah and Stirling City Council, including weeding, seed collecting, planting endemic and non-endemic species and exploring Indigenous perspectives • Taking part in a Basic First Aid course • Hosting the Swan Regional Camp for the fifth year • Volunteering at the Perth Royal Show • Taking part in ANZAC Day celebrations 	<p>Leeuwin Ocean Adventures Leadership sail Telethon City of Stirling – Friends of group St John Ambulance Royal Agricultural Society of Western Australia School community RSL CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Kalbarri District High School	<ul style="list-style-type: none"> • Participating in Simkin's farm camp • Participating in end of year reward in the Darling Range • Trapping native animals as part of CALM's <i>Western Shield</i> program • Taking part in ANZAC Day celebrations • Taking part in Kalbarri Cliffs Coastal Trail Restoration Project • Working safely in nature, including water safety • Undertaking Senior First Aid training • Photographic survey of coastal trails • Navigating through GPS GIS mapping • Creating a unit banner for school assembly • Taking part in the Leeuwin Ocean Adventure Leadership sail 	<p>Royal Life Saving Society of WA St John Ambulance Leeuwin Ocean Adventure Leadership sail RSL CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Katanning Senior High School	<ul style="list-style-type: none"> • Searching for orchids near Katanning • Hosting inter-school planting of trees for habitat and food source for the Carnaby's cockatoo • Working with Mal Graham and his survey of fauna on the Cherry Pool Reserve • Taking part in a fire course and learning bush craft and survival at Icy Creek Nature Reserve • Monitoring nest boxes set up in 2003 at Police Pools • Undertaking a cleanup at Police Pools • Attending Landcare awards • Conducting roadside surveys • Searching for cockatoo nesting hollows near Katanning 	<p>Mal Graham (environmental consultant) Landcare Katanning Roadside Conservation Committee School community CALM's Dwellingup district CALM's Katanning district CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs</p>

Community involvement	Conservation and other community service projects undertaken	Bush Ranger unit
<p>School community CALM's Manjimup district Heritage Unit CALM's Indigenous Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Bench seating for school and Deanhill Trail • Committee project • Assisting in school Year 12 graduation committee • Undertaking the responsibility of flying National, State and Aboriginal flags • Taking part in the ANZAC Day ceremony • Removing fauna transects and nesting boxes for a prescribed burn at Faunadale Nature Reserve • Surveying and marking a fauna transect site • Cleaning, refurbishing, decommissioning and control burn planning for invertebrate pit traps • Surveying black wattle population at Faunadale Nature Reserve • Conducting maintenance and map navigation/map interpretation at Shannon Lodge • Installing a nature reserve access gate • Conducting maintenance at King Jarrah recreational site, weed control, interpretive trail maintenance, cleaning and maintaining barbecue tables, maintaining car park utilities, inspecting nest boxes twice yearly for occupation and maintaining and trapping using Sheffield traps 	<p>Manjimup Community (Incorporating Manjimup Senior High School and Kiernan Catholic College)</p>
<p>Willflower Society of WA CALM's Merredin district Heritage Unit CALM's Indigenous Development and Corporate Affairs Division School community</p>	<ul style="list-style-type: none"> • Conducting surveys of the rare tree stem spider survey and orchids and collecting rubbish at Tamma Parkland • Handling rock wallabies • Malleeowl surveying at Merredin Peak using GPS • Revegetating agriculture farm at school • Professional development CALM Bush Rangers • Conducting pre survey research and underpinning knowledge for conservation projects 	<p>Merredin Senior High School</p>
<p>Edith Cowan University Royal Agricultural Society of Western Australia CALM's Shark Bay district CALM's Exmouth district Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Taking part in a Marine Community Monitoring Program • Working with macroinvertebrates and conducting revegetation planning at Ron Stone Park • Assisting with managing arum lilies at Leeuwin-Naturaliste National Park • Assisting at the Perth Royal Show • Taking part in activities as part of Earth Day at Edith Cowan University • Conducting maintenance, trapping, weeding, taking part in CALM's Project Eden and interacting with dolphins as part of the Shark Bay Reward Camp 	<p>Mount Lawley Senior High School</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
Mundaring Christian College	<ul style="list-style-type: none"> • Taking part in a leadership camp • Dune brushing and seed collecting as part of the Rottnest Reward Camp • Completing a First Aid course • Monitoring local animals without trapping – sand pads – and owl watching • Taking part in a Fire Reward Camp • Focusing on environmental issues, including salinity, bushland conservation, animal conservation, blackberry eradication in local creek area, school rehabilitation including trail making, revegetation and plant identification 	<p>Leeuwin Ocean Adventures Leadership sail Rottnest Island Authority St John Ambulance School community CALM's Fire Management Services CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Newman Senior High School	<ul style="list-style-type: none"> • Informing the community about the Bush Rangers program at the Newman Community Expo • Removing rubbish removal around Kalgan's Pool, a popular and pristine water hole just out of Newman • Maintaining walk trails at Karijini National Park • Recycling aluminium cans and educating the school community as part of the school's recycling program • Removing weeds in Yanchep National Park with a CALM officer 	<p>School community CALM's Pilbara Region CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Newton Moore Senior High School	<ul style="list-style-type: none"> • Making bird boxes • Completing First Aid training • Cleaning up and tree planting at Rottnest Island • Identifying fish from underwater digital photos • Taking part in ANZAC Day celebrations 	<p>St John Ambulance Rottnest Island Authority Western Aquarium Fish and Coastal Water Dive, Bunbury City council RSL CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>
Norseman District High School	<ul style="list-style-type: none"> • Rehabilitating paths and cleaning up at Camp Woody Island • Orienteering, learning about edible and non-edible plants, conducting maintenance and feral animal control at the Wongutha Regional Camp • Learning about CALM's <i>Western Shield</i> program through the Native Animals Pack • Paper recycling and making • Learning First Aid • Constructing nesting boxes • Sand pad monitoring • Curation of herbarium pasting, labelling and identification on FloraBase 	<p>St John Ambulance RSL Leeuwin Ocean Adventures Leadership sail CALM's Esperance district Friends of Herbarium CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>

Community Involvement	Conservation and other community service projects undertaken	Bush Ranger unit
<p>Waters and Rivers Commission Murdoch University STAR program Ribbons of Blue St John Ambulance Northam Town Council Northam Agricultural Society Friends of the River Karen Ducat (wildlife carer) Whiteman Park Waterwise Bob Cooper (bush survival expert) CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Taking part in Clean Up Australia Day through clean ups of the Avon River and school • Tree planting – Northam Senior High School planted its 100,000th tree • Planting sedges and rushes along the Avon River • Water testing, monitoring and maintaining a site near the Northam Weir for Ribbons of Blue database • Observing Karen Ducat – registered native animal carer – and a magpie release program • Receiving instruction and practice in navigation in the bush, including map and compass reading • Undertaking a bush craft and survival unit with expert Bob Cooper • Completed Basic First Aid training • Learning about, and using, methods and practices used to conserve nature including recording, monitoring and sustaining local habitat • Taking part in the Reduce, Reuse, Recycle project • Working towards the Duke of Edinburgh Award • Assisting in the Northam Show animal nursery 	<p>Northam Senior High School</p>
<p>St John Ambulance Maxine Gregory (local artist) Julie Jones (Yamatji person) Local Shire CALM's Geraldton district CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Taking part in, and learning about, the South African box thorn bush weed control project, occupational health and safety and communication, local language and art skills at Yardanga Reserve • Completing First Aid training for instructors and cadets • Learning about and creating communication art and nature photography • Constructing homes for native animals – nest boxes – and placing them in local nature reserves • Taking part in National Tree Day celebrations • Taking part in Clean Up Australia Day celebrations 	<p>Phoenix West Vocational College</p>
<p>Shire Council School community WVA Museum Wildlife carers course Hillside Farm CALM's Science Division CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division</p>	<ul style="list-style-type: none"> • Camping and team building at Greenough • Canoeing on the Murchison River, owl and bird watching • Identifying reptiles • Identifying and mapping marsupial such as kaitarr (dunnart) and spintifex hopping mouse near granite outcrop • Wildlife caring for sick and injured kangaroos • Bird watching, developing nest boxes for a variety of birds and collecting feathers • Identifying local plants with Pia Community people for medicinal and food purposes • Developing Bush Ranger qualities and keeping a journal • Creating an interpretation trail to Indigenous cultural sites • Using Wadjarr language for local plants and animals 	<p>Pia Wadjarr Remote Community School</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
Roleystone District High School	<ul style="list-style-type: none"> • Dieback action group activities • Constructing nesting boxes • Weeding, mulching, planting native trees, recycling, bush craft and survival scenario planning and preparing for camp 	Local botanist School community CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division
Rossmoyne Senior High School	<ul style="list-style-type: none"> • Undertaking rehabilitation work in Bull Creek Reserve • Planting reeds and sedges along the foreshore on a number of occasions • Developing a management plan for area near suburban school in conjunction with Melville City Council • Planting plants grown by Bush Rangers at Bull Creek Reserve on Arbor Day • Sowing seeds and planting seedlings at Bull Creek Reserve • Fundraising for the Native Animal Rehabilitation Centre's shelters for birds feeding in the aviaries • Fundraising to help rehabilitate the sun bears through the Perth Zoo • Collecting paper recycling boxes in offices around the school • Sowing seeds and planting seedlings at Bull Creek Reserve • Assisting at Perth Royal Show <i>Landcare Exhibit</i> by mulching an area, interacting with public and working with Kanyana Wildlife Sanctuary staff • Working with SERCULL tree planting and weed control • Taking part in the Leeuwin Ocean Adventure Leadership sail • Bird watching at North Lake • Completing introductory First Aid training 	Melville City Council Canning River Residents Environmental Protection Authority Perth Zoo Royal Agricultural Society of Western Australia SERCULL Leeuwin Ocean Adventure Leadership sail Dr David Henderson St John Ambulance School community CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs Division

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
<ul style="list-style-type: none"> • Taking part in the Big River water hole camp • Taking part in the Walpole survival and navigation camp • Attending Kalbarri leadership camp • Taking part in the Leeuwin Ocean Adventure • Leadership sail • Rehabilitating the clubhouse • Completing an orienteering course • Collecting seeds in the Tardun area • Saltbush propagating and planting 40,000 plants onto Tardun land for salinity action • Wetland rehabilitation including fencing in Chapman Valley • Learning techniques for bushcraft and survival, including water purification, search and fire • Bush garden propagating, planting and maintenance • Learning about cane toads and how to recognise them • Completing a Senior First Aid course • Fencing on a farming property • Developing navigation maps • Learning about environmental management and sustainability, including weeds, mining, ecotourism, agriculture, survival activities • Creating a science garden at school 	<ul style="list-style-type: none"> • Picking up rubbish at the Rottnest Reward Camp • Learning about fire safety and undertaking community service (weeding) at the Mornington camp • Hiking the Bibbulmun Track • Taking part in the regional camp • Taking part in the Leeuwin Ocean Adventure • Leadership sail • Taking part in the Fire Reward Camp • Taking part in the Perth Royal Show • Taking part in the Fire Reward Camp • Taking part in the Perth Royal Show • Tree planting • Completing First Aid training • Learning navigation skills 	<p>Tardun Christian Brothers Agricultural School (CBAS)</p>
<ul style="list-style-type: none"> • Taking part in the Leeuwin Ocean Adventure • Leadership sail • Local Indigenous community • Leaders • School community • Farm community • St John Ambulance • CALM's Indigenous • Heritage Unit • CALM's Strategic • Development and Corporate • Affairs Division 	<ul style="list-style-type: none"> • Directing parking and assisting with general enquiries at the Warbro Community High School open night • Assisting with the Perth Royal Show Landcare Exhibit • Visiting the local primary school to promote the work and ethos of the Bush Rangers unit • Providing refreshments to the runners at the Rockingham Fun Run • Rockingham Fun Run • Taking part in the Yellow Fish Project • Rehabilitating dunes • Tree planting • Taking part in the Fire Reward Camp • Learning navigation skills 	<p>Thornlie Christian College</p>
<ul style="list-style-type: none"> • Taking part in the Fire Reward Camp • Taking part in the Perth Royal Show • Tree planting • Rehabilitating dunes • CALM's Strategic • Development and Corporate • Affairs Division 	<ul style="list-style-type: none"> • Taking part in the Perth Royal Show Landcare Exhibit • Assisting with the Perth Royal Show Landcare Exhibit • Visiting the local primary school to promote the work and ethos of the Bush Rangers unit • Providing refreshments to the runners at the Rockingham Fun Run • Rockingham Fun Run • Taking part in the Yellow Fish Project • Rehabilitating dunes • Tree planting • Taking part in the Fire Reward Camp • Taking part in the Perth Royal Show • Learning navigation skills 	<p>Warbro Community High School</p>

Bush Ranger unit	Conservation and other community service projects undertaken	Community involvement
Waroona District High School	<ul style="list-style-type: none"> • Raft building – including teamwork and problem solving – at Drakesbrook Weir • Introduction to navigating • Dune rehabilitating at local beaches • Removing cotton bush weed • Managing equipment at Icy Creek Camp • Removing tree guards and rubbish and administering dieback injections with Landcare at Trotters' Reserve • Taking part in the South West regional camp 	<p>Forrest Edge School community Landcare CALM's Dwellingup office CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs</p>
Wongutha CAPS	<ul style="list-style-type: none"> • Undertaking First Aid training • Undertaking fire safety training • Planning the works program for a conservation project • Preparing a conservation project for tree planting • Inspecting trees and collecting seed • Scouting area for bush food • Looking for coastal/beach and sea bush food at Frenchman's peak • Inspecting the old conservation site • Burning and digging weeds on a conservation block • Preparing and cleaning site for arboretum planting • Monitoring wildlife on the remnant vegetation – pit traps • Wildlife handling • Planting trees on Conservation block 1, 2 and 3 • Tree planting on Wongutha Farm to rehabilitate the habitat • Learning about machine procedures, safety and use, and bush orienteering • Learning about bush craft, edible and non-edible plants at Norseman • Seed collecting and tree studies • Cleaning up after a camp and checking equipment • Potting of trees to larger pots for next year • Creating a wildlife corridor for honey possums from farm to remnant vegetation area at Wongutha Farm • Watering seedlings in the conservation project 	<p>St John Ambulance Fire and Emergency Services Authority Vince Mack (Green Scene Nursery) Albany Reptile and Wildlife Park Neil Summerville (land consultant) CALM's Esperance district CALM's Indigenous Heritage Unit CALM's Strategic Development and Corporate Affairs</p>

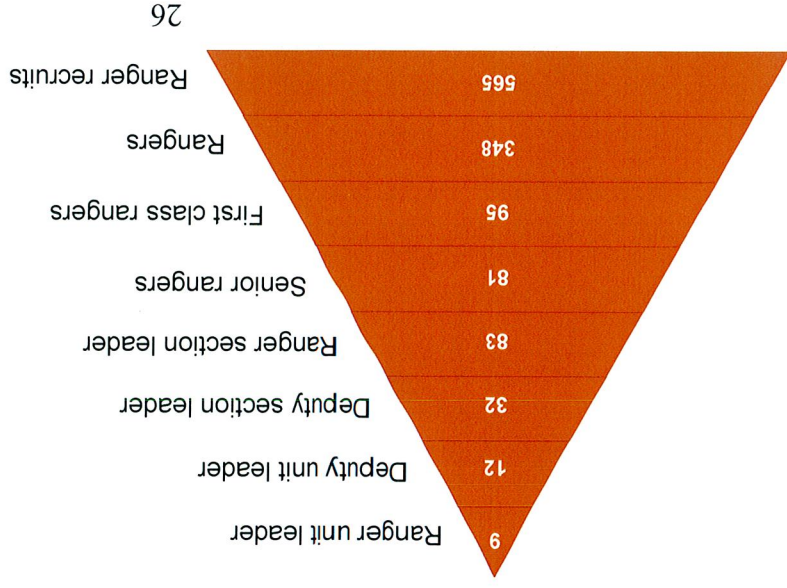
Source: Bush Rangers Unit Annual Reports

The Bush Rangers program: equity and diversity

By design, the Bush Rangers program has in-built flexibility that attracts and caters for a diverse range of young people and adult volunteers. This inclusive nature gives a rich mix of local solutions to conservation problems while maintaining statewide outcomes based framework. Of the 1353 participants in 34 units:

- 20 units are in rural areas, 14 in Perth;
- 47.5 per cent adult instructors are female, 52.5 per cent are male;
- 48.4 per cent of Bush Rangers are female, 51.6 per cent are male;
- 12.6 per cent of cadets identify themselves as Aboriginal. Most of these cadets are from rural and remote communities across WA and 4.2 per cent have their local Indigenous language as their first language; and
- 1.7 per cent are described by their unit as having a disability, with one Bush Rangers unit at Busselton being specifically for severely mentally and physically disabled youth.

New Bush Rangers units in 2005 included Merredin Senior High School, Pia Wadjari Remote Community School via Yalgoo in the Murchison, Phoenix West Vocational College in Geraldton, Dale Christian School in Armadale and Coodanup Community College in Mandurah. The diagram below illustrates the rank distribution of the cadets.



A Wongutha Bush Rangers cadet on a survival course at Bromus Bay.

Communicating about Bush Rangers

Communicating and celebrating the achievements of each unit is a strong component of the Bush Rangers' program.

Opportunities are embraced by the cadets and instructors, the most visible being participation in the Perth Royal Show and other agricultural or community shows or field days. The practical work completed by the cadets is communicated to many more people than their cadet unit.

Each year two cadets from four units take part in the annual Science Division reward at Perup Nature Reserve. Not only do the cadets re-tell the story of fox baiting to their peers but write an article for their school newsletters and magazines that reach audiences of up to several thousand. This is multiplied across WA when the units complete other conservation tasks such as contributing to conservation projects at the Shark Bay World Heritage Area or completing planting for Carnaby's cockatoo habitat.

The history of each unit is well documented as all units maintain a photographic and video record of their projects and expeditions as well as writing school newsletter and magazine articles. Warnbro Community School, Duncraig and other units have produced a video that is watched by hundreds of new students and their families.

A record of how each unit chooses to communicate about their projects is listed in table 1.2 on the next page.

Table 1.2 Communicating about CALM Bush Rangers

	School newsletter	Newspaper/ magazine article	Power Point/ video/ DVD	Intranet/ internet	Radio/ TV	Award events	Artwork	Photo history	Display/ talks at shows/ events	School magazine
Bunbury Cathedral Grammar School	•							•		•
Chisholm Catholic College	•		•					•		•
City Beach High School	•							•	•	
Coodanup Community School	•							•	•	
Coolgardie CAPS									•	
Dale Christian College	•	•					•			
Duncraig Senior High School	•		•	•		•		•		
Ellenbrook Christian School	•		•				•	•	•	

	School newsletter	Newspaper/ magazine article	Power Point/ video/ DVD	Intranet/ Internet	Radio/TV	Award events	Artwork	Photo history	Display/ talks at shows/ events	School magazine
Emmanuel Catholic College	•		•	•		•	•	•	•	•
Esperance Senior High School	•	•								
Geographe Education Support Centre	•	•	•			•	•	•	•	•
Goldfields Baptist College	•	•					•	•		
Gosnells Senior High School	•					•		•	•	
John Forrest Senior High School	•		•	•				•	•	
John Septimus Roe Anglican Community School	•	•			•			•	•	•
Kalbarri District High School	•	•						•		

	School newsletter	Newspaper/ magazine article	Power Point/ Video/ DVD	Intranet/ internet	Radio/TV	Award events	Artwork	Photo history	Display/ talks at shows/ events	School magazine
Katanning Senior High School	•	•				•				
Manjimup Senior High School										
Merridin Senior High School	•		•					•	•	
Mount Lawley Senior High School	•	•		•					•	
Mundaring Christian College	•							•		
Newman Senior High School	•						•		•	•
Newton Moore Senior High School								•		
Norseman District High School	•	•						•		

	School newsletter	Newspaper/ magazine article	Power Point/ video/DVD	Intranet/ internet	Radio/ TV	Award events	Artwork	Photo history	Display/ talks at shows/ events	School magazine
Northam Senior High School	•	•	•	•				•	•	
Phoenix West Vocational College	•	•					•	•		
Pia Wadjjarri Remote Community School	•							•		
Roleystone District High School	•								•	
Rossmoyne Senior High School	•					•		•	•	
Tardun CBAS	•								•	
Thornlie Christian College	•	•		•	•		•	•		
Warnbro Community High School	•	•	•					•	•	
Waroona District High School	•	•							•	
Wongutha CAPS		•	•			•		•		

Professional development

In 2005, professional development opportunities were offered to units, district offices and local communities on an as-needed basis to provide information about the Bush Rangers program and CALM. An annual in-service for 60 adult volunteers was conducted at the Point Walter in Perth. The evaluation from the participants:

- acknowledged of the instructors' commitment to the program;
- consolidated a network of instructors across WA;
- praised the exchange of information about conservation and community service opportunities;
- gained new information about the function and potential links with CALM; and
- gained knowledge and skills for team building and leadership development.

For more information on Bush Rangers WA contact:

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Email: bronwyn.humphreys@dec.wa.gov.au
www.naturebase.net

Appendix 1 – Bush Rangers Instructors 2005

Bush Rangers unit	Instructors
Bunbury Cathedral Grammar School	Rob Brooksbank, Heather Easton
Chisholm Catholic College	Soo Cheng Buckle, Debbie Besch
City Beach High School	Christine Froude
Coodanup Community School	Brett Teakle, Amanda Zele
Coolgardie Christian Aboriginal Parent Directed School (CAPS)	Jim Heslop, Rob Walley, Sian Harris, Trevor Shalson
Dale Christian College	Greg Combs, Michelle Combs
Duncraig Senior High School	Jason Schroeder, Diahn Fisher, Darryl Deacon, Maureen Read, Jarran Bradley, Jennifer Neumann, Kerry Waller, Terry Bell
Ellenbrook Christian College	Carol Smith, Jodie Theseria, Belinda Cook, Robert Morganti, Jon Newland
Emmanuel Catholic College	Christy Coleman, Marina Varone
Esperance Senior High School	Stuart Myers, Matthew Bloomfield, Betty Lewis, Tracy Corps
Geographe Education Support Centre	Bronwen Worthington, Sheree Hepworth, Gillian Piirto
Goldfields Baptist College	Paul Venter, Janine Venter
Gosnells Senior High School	Lyn Wilkinson, Unice Robinson, Stephen Elson, Steve Toghil
John Forrest Senior High School	Stephen Bauer, Tanya Cowie, Gerald Fontaine, Colleen Michel
John Septimus Roe Anglican Community School	Carleen Edwards, Steve Edwards, George Georgis, Peter Bowers (Snr), Fiona Bowers, Tina Bowers, Peter Bowers (Jnr), Arthur Panayotou, Caitlyn Walker, Quinton Edwards
Kalbarri Senior High School	Craig Tapper, Sophie Pisano
Katanning Senior High School	Phil Hogan, Marika Altham, Rachel Tims, Des Plumb
Manjimup Senior High School	Graeme Gibson, Darlene Herbert
Merredin Senior High School	Penelope Nielsen, Paul Bandurski, Kelly McCormack
Mount Lawley Senior High School	Andrew Paul, Robynn Blay, Dave Moss, Kylie Burke, Shakara Walley, Steve Raphael, Bianca Scibberas, Israel Spence, Danielle Huljich, Kym Catania
Mundaring Christian College	Steven Myers, Andrew Vallance, Joanne Goodall, Christine Nolan, Vicky Suarez, Nathan De Bruyn
Newman Senior High School	Simon Cox, Andrew McWhirter, Samantha Glazier
Newton Moore Senior High School	Kevin Lloyd, David Phillips, David Barber, Jason Schuttloffel
Norseman District High School	Naomi Coffey, Warren Willis
Northam District High School	David Taylor, Matt Zarb, Beryl Korotshuk, Kylie Taylor
Phoenix West Vocational College	Querino Maringi, Allan Headland, Don Moore
Pia Wadjari	Bernie Carroll, Gail Cresswell and Fred Gorman
Roleystone District High School	Paul Huisman, Debbie Goad, Glenda Huisman
Rossmoyne Senior High School	Wayne Capes, Ann Clemens, Mike Casley, Phil Cooper, Chris Stewart
Tardun Christian Brothers Agriculture High School	Marty Paton, Yvette Paton, Jimmie Drage, Anita Kriptner, Jason Morrissey, Darcey Ryles, Simon Leulf, Arron Worsdell
Thornlie Christian College	Anthony Street, Bill Innes, Belinda Fowler, Putsadee Winslade, Nyaree Summerfield, Wendy Brownhill, Hannes Van Neikerk, Anthony Hockings, Siska Hocking, Ian Stokes, Loraine O'Callahan-Munt, Ian Bower
Warnbro Community School	Kent Chambers, Emma Harcour, Kevin Watson, David Karcheski, Michael Jurweitz, Andrea Havey
Waroona District High School	Kristy Smith, Tom Scotland
Wongutha Christian Aboriginal Parent Directed School (CAPS)	Gary Paul, Wayne Rogan, Harry Graham, Violet Turvey, Annie Dabb, George Turvey, Wayne (Poppy) Harris, Terry Buckley, Vanessa Narkle, Shane Meyer, Herbert Howell, Russ Rogan

Appendix 2 – CALM staff involved in the Bush Rangers Program 2005

(Please note: FTE positions as of 2005)

CORPORATE SERVICES DIVISION

Risk Management Section
John Ireland
Risk manager

Geographical Information Services Section
Robyn Wilson
Manager GIS applications
Mark Laming
Project leader map publishing
Marguerite D'Alton
GIS officer
Jack Green
GIS officer

NATURE CONSERVATION DIVISION

Gordon Wyre
Director Nature Conservation
Wildlife Conservation Section
Peter Mawson
Senior zoologist

PARKS AND VISITOR SERVICES DIVISION

Indigenous Heritage Unit
Koodah Cornwall
Tania Donovan
Delvene Cornwall
Cultural community programs officer
Business development officer
Aboriginal heritage officer
Regional Parks Fremantle
Phil Spencer
Operations officer

REGIONAL SERVICES DIVISION

WARREN REGION

Valley of the Giants – Tree Top Walk
Staff of the Valley of the Giants

GOLDFIELDS REGION

Julie Patten
Reserves officer

MIDWEST REGION*Geraldton*

Kevin Marshall District wildlife officer

Kalbarri National Park

Mike Paxman Senior ranger

Russel Asplund Ranger

Shark Bay District

Mark True Senior Ranger

Cathy Zwick Senior ranger

Colleen Sims Manager Project Eden

Nicole Noakes Manager Peron Captive Breeding Centre

Monkey Mia Reserve

Emma Adams Monkey Mia reserve officer

MOORA DISTRICT*Jurien Bay*

Don Williams Pinnacles National Park ranger

WEST KIMBERLEY DISTRICT

Kingsley Miller District wildlife officer

PILBARA REGION

Ashley Millar Ranger

Karijini National Park

Paul Udinga Ranger

SOUTH COAST REGION*Albany Work Centre*

Martin Lloyd Regional leader, parks and visitor services

Luke Coney Albany parks and visitor services officer

Esperance District

Mike Fitzgerald Nature conservation coordinator

Geoff Young Parks and visitor services coordinator

WARREN REGION
Manjimup Work Centre
 Katie Petersen
 Zoe Clarke

Manjimup work centre
 Conservation officer

Dwellingup Office
 Ingrid Hunt

Ranger

Yanchep National Park staff

SWAN COASTAL DISTRICT

SWAN REGION

Alex Moylett

Fire training officer

Kirup Work Centre
 Steve Blythe

L4 A/WU workers' coordinator

Wellington District
 Renee Asher

EcoEducation officer

Margaret River Work Centre
 Clare Forward

National park ranger

Iain Farmer

Senior pilot

Janet Date

Project officer

John Tillman

Regional fire coordinator

Peter Henderson

Program leader parks and visitor services

Bunbury

SOUTH WEST REGION

Ian Hughes

Senior ranger

Stokes National Park

David Chadwick

Ranger

Peter Masters

Ranger

Doc Reynolds

Camp cultural maintenance officer

Geoff Passmore

Senior ranger

Cape Le Grande National Park

Allan Rose

Senior ranger Cape Arid

Cape Arid National Park

WHEATBELT REGION*Katanning District*

Des Plumb District wildlife officer

*Merredin District*Paul Blechynden District manager
Jonathan Pridham District wildlife officer
Heather Adamson Land for Wildlife officer**SCIENCE DIVISION***Manjimup Research*Bruce Ward Senior technical officer
Graeme Liddelow Senior technical officer**STRATEGIC DEVELOPMENT AND CORPORATE AFFAIRS***Cygnets Hall*

Ron Kawalilak Director, Strategic Development and Corporate Affairs

*Programs and Publications Section*Sue McKenna Programs and publications manager
Rhianna King A/Communications officer*Graphic Design Unit*

Gooitzen van der Meer Senior graphic designer

*EcoEducation Section*Bronwyn Humphreys Senior project officer – Bush Rangers WA
Melissa Patterson Project officer

Source: Bush Rangers unit annual reports

Appendix 3 – Bush Rangers Unit statistics

Bush Rangers unit	Number of cadets	Rank	Volunteer hours
Bunbury Cathedral Grammar School	21	21 Ranger recruits	542
Chisholm Catholic College	30	24 Rangers 3 First class rangers 3 Ranger section leaders	7560
Coदानup Community College	23	4 Ranger section leaders 1 Ranger unit leader 18 Ranger recruits	2820
Coolgardie CAPS	38	35 Ranger recruits 3 Ranger section leaders	2278
City Beach School	13	13 Ranger recruits	2048
Dale Christian College	12	12 Ranger recruits	252
Duncraig Senior High School	32	14 Rangers 9 First class rangers 3 Senior rangers 4 Ranger section leaders 1 Deputy leader 1 Ranger unit leader	9034
Ellenbrook Christian College	45	35 Ranger recruits 5 Rangers 1 Ranger section leader 2 Deputy section leaders 2 Ranger section leaders	8568
Emmanuel Catholic College	52	40 Rangers 9 First class rangers 3 Senior rangers	12,920
Esperance Senior High School	54	26 Ranger recruits 18 Rangers 6 First class rangers 4 Senior rangers	14,560
Geographe Education Support Centre	24	24 Ranger recruits	11,448
Goldfields Baptist College	8	5 Ranger recruits 3 Senior rangers	480
Gosnells Senior High School	34	16 Ranger recruits 7 First class rangers 9 Senior rangers 2 Ranger section leaders	24,500
John Forrest Senior High School	26	8 Rangers 4 First class rangers 14 Senior rangers	4238

John Septimus Roe Anglican Community School	72	15 Ranger recruits 28 Rangers 10 First class rangers 15 Senior rangers 3 Ranger section leaders 1 Deputy unit leaders	27,432
Katanning Senior High School	12	5 Ranger recruits 4 Rangers 2 Senior rangers 1 Ranger unit leader	1200
Kalbarri District High School	12	4 Rangers 4 Ranger section leaders 4 Deputy section leaders	8016
Manjimup Senior High School	24	7 Ranger recruits 12 Rangers 2 Senior rangers 3 Ranger section leaders	3348
Merredin Senior High School	5	4 Ranger recruits 1 Ranger section leaders	1100
Mount Lawley Senior High School	75	40 Ranger recruits 15 Rangers 12 Assistant section leaders 8 Ranger section leaders	17,421.5
Mundaring Christian College	42	19 Ranger recruits 16 Rangers 3 Senior rangers 4 Ranger section leaders	11,140
Norseman District High School	19	14 Rangers 2 Section leaders 2 Deputy section leaders 1 Ranger unit leader	2086
Northam Senior High School	29	13 Ranger recruits 10 Rangers 1 Senior rangers 3 Ranger section leaders 1 Deputy unit leader 1 Ranger unit leader	7145
Newton Moore Senior High School	42	16 Ranger recruits 22 Rangers 4 Senior rangers	8800
Newman Senior High School	33	23 Ranger recruits 7 Rangers 2 Senior rangers 1 Ranger unit leader	2790
Pia Wadjarri Remote Aboriginal School	15	15 Ranger recruits	6516

Source: Bush Rangers Unit Annual Report

Phoenix West Vocational College	15	15 Ranger recruits	1500
Roleystone District High School	18	3 Ranger recruits 7 First class rangers 4 Ranger section leaders 4 Deputy section leaders	780
Rossmoyne Senior High School	42	15 Ranger recruits 14 Rangers 3 First class rangers 4 Ranger section leaders 5 Deputy unit leaders 1 Ranger unit leader	7800
Tardun CABS	38	13 Ranger recruits 9 Rangers 16 Senior rangers	11,760
Thornlie Christian College	94	35 Ranger recruits 32 Rangers 5 First class rangers 10 Deputy section leaders 10 Section leaders 2 Unit leaders	12,040
Warnbro Community High School	158	80 Ranger recruits 37 Rangers 21 First class rangers 20 Ranger section leaders	20,664
Warona District High School	21	10 Ranger recruits 5 Rangers 6 First class rangers	5290
Wongatha CAPS	55	32 Ranger recruits 10 Rangers 5 First class rangers 2 Deputy leaders 5 Ranger section leaders 1 Ranger unit leader	25,156
34	565	565 348 Rangers recruits 95 Rangers 81 First class rangers 32 Senior rangers Deputy section leaders Deputy section leaders Ranger section leaders Deputy unit leaders Ranger unit leaders	28,1964
Total = 1225			

Appendix 4 – Equity and Diversity statistics

Unit/School Name	1st Male	1st Female	1st Total	% Male	% Female	2nd Male	2nd Female	2nd Total	% Male	% Female	Male Staff	Female Staff	Total Staff	Aboriginal	Born overseas	Language	Disability
Bunbury Cathedral Grammar School	0	0	0	0	0	2	9	11	18	82			0				
Chisholm CC	16	18	34	47	53	13	17	30	43	57	1	2	3			6	
City Beach HS	9	4	13	69	31	8	5	13	62	38	1	1	2				
Coodanup CC	6	3	9	67	33	7	16	23	30	70	1	1	2				
Coolgardie CAPS	29	26	55	53	47	22	13	35	63	37	3	1	4	55		12	
Dale Christian School	10	4	14	71	29	0	0	0	0	0	1	1	2	3			
Dun Craig SHS	26	22	48	54	46	26	21	47	55	45	3	2	5	1	5	1	5
Ellenbrook CS	30	35	65	46	54	31	34	65	48	52	4	4	8				
Emmanuel CC	22	26	48	46	54	21	31	52	40	60	0	3	3				
Esperance SHS	30	22	52	58	42	26	26	52	50	50	2	3	5	2	2	2	2
Geographe Ed Support Centre	14	10	24	58	42	14	11	25	56	44	0	3	3	1			
Goldfields BC	3	6	9	33	67	3	5	8	38	63	1	1	2		1		
Gosnells SHS	22	13	35	63	37	19	11	30	63	37	2	2	4			1	1
John Forrest SHS	25	12	37	68	32	21	12	33	64	36	2	2	4	5	8		
John Septimus Roe ACS	35	28	63	56	44	35	33	68	51	49	4	2	6				2

Kalbarri DHS	5	7	12	42	58	5	8	13	38	62	0	1	1					
Katanning SHS	6	5	11	55	45	6	6	12	50	50	2	1	3					2
Manjimup SHS	16	7	23	70	30	12	2	14	86	14	1	1	2	1				1
Merredin SHS	3	10	13	23	77	0	0	0	0	0	1	2	3	1				
Mount Lawley SHS	38	37	75	51	49	21	40	61	34	66	4	4	8					
Mundaring CC	35	30	65	54	46	33	30	63	52	48	3	3	6	1	9			2
Newman SHS	14	17	31	45	55	9	9	18	50	50	2	1	3					
Newton Moore SHS	16	25	41	39	61	15	26	41	37	63	3	1	4					
Norseman DHS	12	5	17	71	29	8	4	12	67	33		1	1	2	1	1	1	2
Northam SHS	16	20	36	44	56	18	19	37	49	51	2	2	4	3			1	2
Pia Wadjari Community School	9	6	15	60	40	9	6	15	60	40	1	1	2	15				
Phoenix West Vocational College	0	0	0	0	0	12	7	19	63	37			0	17				1
Roleystone DHS	8	10	18	44	56	0	0	0	0	0	1	2	3					
Rossmoynne SHS	23	21	44	52	48	26	25	51	51	49	4	1	5		7		5	2
Tardun CBAS	41	2	43	95	5	42	0	42	100	0	2	2	4	17	3			
Thornlie CC	43	57	100	43	57	47	47	94	50	50	6	5	11					
Waribro CHS	62	92	154	40	60	57	86	143	40	60	4	2	6	1				1
Waroona DHS	10	12	22	45	55	8	12	20	40	60	1	1	2					
Wongutha CAPS	27	27	54	50	50	29	26	55	53	47	10	6	16	54				25

Appendix 5 – Bush Rangers program nationally accredited training

Table 5.1 Nationally Accredited certificates I and II in Conservation and Land Management

Bush Ranger unit	Number of certificates	Certificate I	Certificate II
John Septimus Roe Anglican Community School	1	-	1
Rossmoyne Senior High School	17	-	17
Wongutha CAPS	10	7	3
Total	28	7	21

Table 5.2 Competency in Basic Fire Training (module 1.26)

Bush Rangers unit	Number of certificates
Como Senior High School	2
John Forrest Senior High School	2
John Septimus Roe Anglican Community School	15
Mt Lawley Senior High School	5
Rossmoyne Senior High School	15
Chisholm Catholic College	2
Emmanuel Catholic College	11
Roleystone District High School	11
Ursula Frayne Catholic College	5
Northam Senior High School	3
Warnbro Community School	4
Gosnells Senior High School	4
Mundaring Christian College	3
Kensington CALM	1
Total	98

+ 2000 stats 15 participants unknown

Table 5.3 Competency – chainsaw operation

Bush Rangers unit	Number of certificates
Wongutha CAPS	12