



CAREERS AT MARWELL



Information Pack

Marwell Wildlife

Type of organisation: Local / National organisation

We would class ourselves as a national organisation as Marwell works in partnerships worldwide.

Number of employees – Around 160 permanent or fixed term staff but can go up to 250 including seasonal positions.

Marwell Wildlife is dedicated to the conservation of wildlife and other natural resources, both locally and globally.

As a charity, we are action oriented and at the forefront of conservation work around the world, working in partnership with communities, statutory agencies, and other non-governmental organisations.

We engage with over 35,000 children and young people through our conservation educational programmes, and welcome over 500,000 visitors each year to our 140-acre zoological park. In every contact we seek to encourage understanding and inspire care for the natural world.

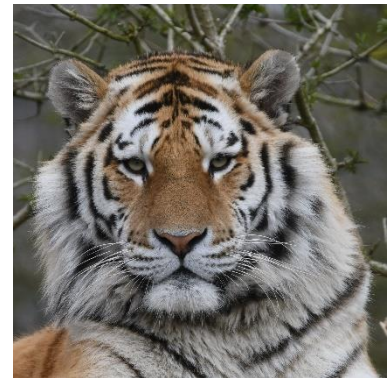
The Zoological Park is open for visitors to get close to nature; we are also involved in a number of breeding programmes to help conserve species that are under threat and hold the studbooks for a number of animal species.

Science is used in a number of ways including animal care, animal nutrition, and education.

Some roles will involve the use of medicines for the treatment of animals. You can use the following pages to carry out some research on the different jobs at Marwell.

Some of the jobs that involve the use of science at Marwell are:

- **Animal Keeper**
- **Education officer / co-ordinator**
- **Veterinarian**
- **Veterinarian Assistant**
- **Curator**
- **Conservation Biologists**
- **Sustainability manager**
- **Field Biologist**
- **Animal Nutritionist**



Animal Keepers – (sometimes known as Zookeepers)

Role purpose

Caring for animals with minimal supervision from the section manager

Ensuring animal houses are maintained to specified standards

Supporting Marwell Wildlife charitable objectives

To engage with guests to enhance their experience at Marwell Wildlife

Key responsibilities

- To ensure high standards of animal welfare are maintained at all times
- To ensure the husbandry routines and general health of the animals are maintained to a high standard
- To check the health and well-being of animals on the section and promptly report and record any changes observed
- Ensure any concerns relating to the animals or facilities are directed to your line manager immediately
- Contribute to the development of the section
- Adhere to Marwell's health and safety policy and procedures
- Support your section's development of health and safety documentation
- To ensure that all equipment held on section is used and maintained in accordance with relevant instruction
- To ensure that all equipment that you use is kept in good working order, is well maintained, and is stored suitably
- Interact and share experience with visitors and guests

Qualifications

- 5 GCSEs (pass) or equivalent
- Diploma in the Management of Zoo and Aquarium Animals - DMZAA or equivalent

Experience

- Interest and commitment to animal welfare and conservation
- Minimum of three year's practical experience of looking after and
- working with exotic animals in a professional capacity
- Basic understanding of health and safety requirements

Skills and abilities

- Demonstrate sound knowledge of animal husbandry
- Ability to use initiative
- To be able to demonstrate common sense
- Good verbal communication skills
- Ability to work in a team
- Punctuality
- Able to prioritise

Basic numeracy and written communication skills Competent IT user
(Microsoft Word, Excel & PowerPoint) Good interpersonal skills

Education Coordinator

- To plan, develop, deliver, and evaluate education outputs for area of specialism
- To contribute to the delivery of the full range of education programmes
- Participating in budget planning and fund-raising efforts as required
- Review & update the overall programme, any support materials, and resources
- Make recommendations regarding changes in direction or opportunities for development
- Participate in the preparation of budget for forthcoming financial year
- Contribute to project / funding proposals as appropriate
- Contribute to a centralised file on relevant legislation & recognised standards for best practice

Research areas:

- Relevant conservation issues
- Contemporary issues related to sessions/activities
- Scientific or other specialist knowledge
- Teaching/engagement techniques
- Changes in relevant legislation & best practice
- Appropriate training and other personal development opportunities

Implementation of Education Programmes:

- Deliver full range of sessions & activities
- Train & support team members in your area of specialism
- Undertake specific tasks and participate in team activities to ensure programme requirements are met
- Maintain appropriate academic resources, IT, session/activity equipment
- Undertake animal care and handling as required

Qualifications

- Degree in biological or environmental sciences and / or education
- Relevant teaching qualification (PGCE) Relevant post graduate level qualification

Experience

- Relevant experience within the area of specialism
- Basic understanding of health and safety requirements

Skills and Abilities

- Oral & written communications
- Facilitation
- Planning & project management
- Time management & prioritisation
- IT skills including proficiency in word processing, database management & PowerPoint

Education Officer

Role Purpose

- Contribute to the delivery of the full range of education programmes
- Undertake specific tasks in support of education programmes

Key Responsibilities

- Deliver full range of sessions and activities
- Undertake specific tasks and participate in team activities to ensure programme requirements are met
- Research conservation and contemporary issues related to sessions and activities
- Adhere to health and safety policy and procedures, identify hazards, and undertake appropriate risk assessments
- Plan and carry out project tasks identified by line manager
- Undertake and evaluate special projects as required
- Produce educational materials
- Produce reports as required
- Care for the animals in the Science and Learning Centre

Essential Qualifications

Degree in biological or environmental sciences and / or education or equivalent qualification

Essential skills and abilities

- Excellent verbal and written communications
- Excellent presentation skills
- Ability to work well in a team
- Time management and prioritisation skills
- IT skills including proficiency in word processing, database management and PowerPoint
- Good attention to detail
- Relevant teaching experience

Case Study Francesca - KS1-3 Education Officer

One of the best things about my job is that I always get to do something different. My responsibilities range from looking after the Education animals (including rats, snakes, geckos and stick insects) to teaching workshops to children from 4-14 years old. I really enjoy getting to share my passion for biology with the children, especially when they are as excited to learn about the animals as I am!

I also spend a lot of time researching information on animals so that I can design new resources and activities for schools to use out in the park. This means that my degree in Zoology is very relevant because I already have a good basis of biological knowledge. Having said that there are always amazing new facts for me to find out!

Animal Curators and records keepers

Curators are responsible for acquiring animals for the zoo - through captive breeding programmes, from other zoos and sometimes from the wild.

They work closely with various government agencies and the zoo to ensure that the transport and collection of these animals is done according to government guidelines and animal welfare rules.

Some Zoo Curators may be in charge of the various zoological units, or a zoo's entire animal collection and animal management staff. This will vary depending upon the zoo. The curators at different zoos often have very different roles.

Other typical responsibilities of curators include:

- Developing and organising new collections and their accommodation to expand and improve educational and research facilities
- Maintaining records and cataloguing animals
- Researching, compiling, and preparing written information about catalogues and publishing it on the institution's website
- Collaborating with other institutions
- Managing studbooks

Qualifications and training required

Generally, a good degree is required to become a curator, and often post graduate experience is necessary but not always.

Key Skills and qualities for Curators

- Excellent project management skills
- Excellent verbal and written communication skills
- Attention to detail
- Knowledge of government requirements for the transport of animals in specific areas

Veterinarian

Vets at Marwell are very important for helping to maintain the health and welfare of the animals.

The vets provide treatment to animals if they have been injured or if they are ill and provide advice on the enclosures to ensure the animals can behave as naturally as possible and be fit and healthy.

They prescribe medicines, take x-rays, and carry out surgery where required. Some vets also carry out post-mortems on animals that have died to try and determine cause of death.

Qualifications

If you want to train to become a vet, you will need to study at university. The Royal College of Veterinary Surgeons approves a number of courses for example at: Bristol, Cambridge, Edinburgh, Glasgow, Liverpool, London (the Royal Veterinary College) and Nottingham.

The degree courses are five years in length (six years at some schools!)

“The veterinary surgeon is responsible for the prevention of disease and for the medical and surgical treatment of animals including household pets, zoo animals, farm animals and horses.

Opportunities exist in practices that specialise in small animals, food producing animals, equine work or in mixed practices dealing with both small and large animals. Many veterinary surgeons working in practice choose to further their knowledge by studying for additional qualifications, such as the Certificates and Diplomas offered by the RCVS, and it is a requirement of RCVS that all veterinary surgeons keep their skills and knowledge up to date throughout their careers.”

Quoted with permission from :

<http://findavet.rcvs.org.uk/veterinary-careers/i-want-to-be-a-vet/#vetprof>

Veterinary Nurse

Veterinary nurses provide the support needed to the veterinary surgeon. They ensure the animal is looked after if it is ill or recovering from surgery. They may be required to carry out some medical procedures and tests on the animals in the zoo.

Qualifications

Vocational courses are available through certain colleges, for example Level 3 Diploma in Veterinary Nursing. You could also go to university and complete a degree in veterinary nursing, which takes 3- 4 years.

Role Requirements

- Providing veterinary nursing care to animals in the collection
- Promoting health care and high standards of welfare to keeping staff
- Managing the veterinary hospital
- Assist in development of the veterinary facilities
- Providing day-to-day support to the veterinarian
- Assist in developing preventative medicine programmes
- Ensure highest standards of welfare within the collection
- Co-ordinating animal imports and exports
- Contributing to park wide projects and events as required
- Support staff and student education programmes
- Assist in managing and developing a high standard of veterinary care for Marwell Wildlife's collection
- Species specific care for invertebrates, fish, reptiles, avian and mammalian species
- Assist in the development of preventative medicine programmes (including vaccination and parasite management in an environmentally sound manner)

- Alongside the veterinarian ensure biosecurity for the collection and any Marwell Wildlife led projects
- Ensuring meticulous and comprehensive medical records are maintained Develop in house parasite screening programme in line with parasite management protocols
- Support Marwell's husbandry programmes
- Utilising anaesthesia techniques and monitoring in line with best practice
- Co-ordinate the importation and exportation of animals into the collection
- Maintain and arrange servicing of all veterinary equipment
- Support the strategic development of the veterinary programmes at Marwell Wildlife
- Assist in the education of staff with regards to zoonosis and other health and safety issues as they arise

Experience

- Minimum of two years veterinary nursing experience with at least one year zoo or exotic nursing experience
- Experience with perissodactylids and artiodactylids preferred but must exhibit some knowledge of all taxonomic groups
- Exhibit knowledge of biosecurity procedures
- Experience with current anaesthetic techniques and knowledge of anaesthetic equipment
- Experience of use and maintenance of Dan-inject, or other, remote chemical immobilisation systems
- Ability to undertake basic laboratory procedures in house
- Demonstrate an interest and commitment to animal welfare, conservation, and zoo medicine

Skills and Abilities

- Enthusiastic and supportive
- I.T. skills including Microsoft Office
- Clear and effective written and verbal communication
- Effective and appropriate decision making
- Organisation and time management
- Attention to detail
- Be able to convey confidence
- Ability to work individually but also as part of a team
- Demonstrate commitment in contributing to the veterinary services at Marwell Wildlife

Other

A full driving licence valid for the UK is required for on- and off-site usage of organisational vehicles which is an essential part of this role

Case Study Adela– Marwell Vet Nurse

My main responsibility is to support the vet surgeon in the daily animal care.

I monitor anaesthetics, medicate patients, assist the surgeon with the operations, work out dose rates for medicating, prepare medications for use on section, take radiographs, and place IV lines when required.

I take all measurements of the animals' respiratory and heart rates and if necessary, take bloods and blood pressures.

I ensure that all the samples collected such as blood, tissue, faeces, urine etc. are packed and sent to the laboratory.

I am a general cleaner as well, as the surgery needs cleaning every day to ensure biosecurity of the surgery.

I maintain the surgery and pharmacy ensuring all the stock is topped up and reordered as necessary.

I ensure that we have up to date records for all the pharmacy stock and that the VMD (veterinary medicines directorate) are kept up to date with the controlled drugs that we use.

I manage all the surgery ensuring that we are keeping to the RCVS good standards of practice guidelines.

I deal with all the work experience requests and volunteer requests that come into the park for the department.

I do import and exports of animals ensuring that all pre movement tests are performed and all paperwork is up to date.

I deal with all the clinical waste from the surgery (cadavers etc) and deal with the crematorium to ensure it is disposed of correctly.

This is just a drop in my ever-expanding ocean of responsibilities so you can see I am nurse, accountant, practice manager and general cleaner. My role is extremely varied, and it is on a day-to-day basis that you find out which role you will be playing for the day.

I went to Sparsholt College to study Veterinary Nursing where I did NVQ 2 and NVQ 3. To be able to enrol on the course you need 5 GCSEs at grade C or above and 3 have to be in science.

Case Study Jackie– Marwell’s Animal Nutrition Advisor

What is my role as Animal Nutrition Advisor?

My role as Animal Nutrition Advisor at Marwell is to provide sound nutritional advice in regard to the range of exotic species we hold here at the zoo. This involves the review of current diets employed and where necessary the design and implementation of new and / or improved diets. It involves liaising with the veterinary team to discuss ideas for any dietary changes and then working closely with the animal keepers and sections to discuss these changes and ensure their smooth implementation and subsequent monitoring of the animals.

What are my main duties and responsibilities?

The largest proportion of my time is dedicated to what I call “Applied Nutrition”. This area is divided into two main sections:

1. Current nutritional issues
2. Long term dietary reviews.

Current nutritional issues

These are those which arise on a day-to-day basis and are most commonly highlighted as a result of clinical signs and health problems with a particular individual or group of animals. For example, loss of weight or condition, lameness, and gastrointestinal problems such as loose faeces.

Sometimes problems are highlighted upon veterinary examination under anaesthesia or even on post-mortem, which are not always visible under normal daily monitoring of the animals until clinical signs become apparent.

These nutritional issues are what we class as high priority and therefore my time will be spent looking into them and working with the veterinary team to try and provide a solution by means of suitable dietary changes.

Long term dietary reviews

These are something I am aiming to complete for every species within the collection. Many of the diets we still feed is fairly historical and as a result are over complicated. Such dietary reviews involve in depth research into the natural biology and ecology of the species, current nutritional requirements, full dietary analysis, and the devising of suitable dietary changes with a plan for their implementation.

I will also consider the history of the species at the zoo and whether there have been any common trends in health status and reproductive performance which may have nutritional implications.

An example of a long-term dietary review completed this year is the simplification of our bongo diet from a multi pellet diet supplemented with fruit and vegetables, to just a single browser pellet with a higher emphasis on forage intake.

Other duties and responsibilities within my role include the following:

- Reviewing our animal feeds and suppliers – looking into where we source our animal feeds from, ensuring they are suitable in terms of ingredient and nutrient composition. Also looking at costings of diets and where we can be financially more efficient whilst still providing high quality feed products.
- Diet recording – this involves ensuring we have up to date diet sheets for each species within the park. Not only is this a legal requirement, but it is also essential that everybody follows the same diet for a given species.
- Chair of the Nutrition Committee at Marwell
- Education – giving lectures, presentations and organizing nutrition seminars, providing nutrition training to our keepers.
- Research into animal nutrition
- CPD – ongoing development of my own knowledge

What skills do you need to be an animal nutrition advisor?

- An interest and keen enthusiasm for the subject is essential – in fact probably more important than anything else!
- A background in animal nutrition is beneficial although not essential – it is hard to gain a qualification in nutrition of exotic animals as there is really not a great deal available at the present time; but you will undoubtedly build up your knowledge over time.
- A good understanding of basic animal biology is important – comparative anatomy of different species is a real interest of mine and very important when it comes to nutrition.
- Good communication skills are important – you will spend a lot of time working with the veterinary team and animal keepers.
- Diplomacy skills – it is a challenge to get people to try and change their views when they have been feeding their animals for many years, so it is important to remain professional and diplomatic when recommending and implementing dietary changes.
- Flexible work ethic – if you are working on something and a nutritional issue arises unexpectedly, you need to be flexible to change what you are doing and focus on these high priority issues.

Case Study Zeke Davidson - Field Biologist

What does your job involve?

My training is in conservation biology and my main interest is the sustainability of wildlife. This means that I have the perfect job! Effectively, I manage partnerships with local Kenyan organisations and international affiliates to ensure that the money and time we invest in our conservation work on the ground is properly used and achieves our goals. I am fortunate to be able to build new partnerships for Marwell too, and this is taking our conservation outreach further into the drought stressed remote north of Kenya. I spread my time between Nairobi, the Kenyan capital, where I interact with major state conservation organisations, foreign NGOs and some of our local partners, and the landscape of northern Kenya, where I get my hands dirty doing the groundwork for our conservation projects.

What is the best thing about your job?

The freedom to spend my time intimately close to the people and wildlife we are committed to conserving. I am thrilled to be able to move within this landscape and have a direct role to play in its future.

What is the most challenging part of your job?

Undoubtedly, it is the frustration of our limitations in meeting the needs of the local people who live alongside the wildlife we are most concerned about. For wildlife to have a future in human dominated landscapes, we have to engage local communities in its custodianship. A good illustration of this challenge is the process of changing a man's attitude toward living with predators when he spends his nights listening to lions, hyena and leopard prowling around his livestock and can't go outside safely without fear of being eaten himself.

What have been the highlights of your career?

I have walked on the Antarctic ice shelf and studied surface water carbon flux in the Southern Ocean. I've travelled overland through southern Africa collecting honeybee samples and studying where the different races of bees occur while trying to understand what can be done about honeybee population decline.

I've darted lions in Zimbabwe and studied the way that trophy hunting changes their social structure, habitat use and movement dynamics. I've spent two years at sea on fishing trawlers off the South African West Coast trying to find viable stocks of deep-water fish before they are commercially threatened.

And now I travel the remote, rugged, far north of Kenya learning from the old culture and its local wisdom while trying to conserve small populations of endangered species like Grevy's zebra and desert cheetah. So, I'd have to say that my career has been a highlight itself!

Who do you work with?

The people I work most closely with are the Samburu, Rendille, Turkana and Laikipia Maasai tribes found north and east of Mount Kenya. The local partners we collaborate with, such as the Grevy's Zebra Trust and the Northern Rangelands Trust, are staffed by people endemic to the north of Kenya, or born to Kenya and raised here, some in the cities and some descended from the English settlers as well. So, with the exception of only two people so far, I work with Kenyans.

What type of animals do you work with?

Our main conservation work is with Grevy's zebra, but we also have input on a number of other species: lion, cheetah, Beisa oryx and elephant also feature.

Qualifications

- Field biologists usually need a degree in biology, environmental biology, botany, or other related field. Further qualifications at masters or PHD level would be an advantage in a competitive field.
- Prospective field biologists often complete courses in principles of biology, ecology, microbiology, biology of animals, and biology of plants.
- Many potential field biologists volunteer for opportunities to gain practical experience in the field.



- New field biologists often shadow experienced professionals to learn the necessary skills and required procedures.
- Good communication skills, ability to work with others, experience of survey and analysis techniques, good IT skills.

Conservation Biologist Tanya

What are your main duties / responsibilities?

Management of the Grevy's zebra EEP (European Endangered species Programme). This involves liaison with conservation officers in the field for this species. I participate in field activities, presentation of field work to EEP members, and fundraising for field work through the EEP.

I also manage the Hartmann's Mountain zebra EEP, keep the international studbooks for Grevy's zebra and Hartmann's Mountain zebra, and teach studbook software and genetic/demographic analysis tools to European colleagues.

Qualifications and Skills

- Masters in biology/zoology
- People management skills Teaching skills

How did you first start in your role?

I had a 9-month work placement in biology office with responsibilities for enrichment in the park and support for the studbook keeper.

I then took over from departing biologist and developed the role from there. A lot of it was learning by doing and training courses for breeding programme management.

What do you enjoy most about your role?

The idea that my work makes a difference to some endangered species. Also, I like juggling a lot of different tasks at the same time.

What are the most challenging aspects of your role?

Managing people and their expectations.

Conservation Biologist Dr Heidi Mitchell

What are your main duties / responsibilities?

I am the research manager at Marwell. My role enables me to get involved in all scientific research that happens at Marwell Wildlife. I co-ordinate the research, linking with higher education establishments whose students want to carry out some research for their own studies.

In addition to acting as a facilitator for research I also carry out my own research. Another of my roles is the coordinator for higher education. I am trying to

expand what Marwell is doing with universities in terms of teaching and learning,

this includes giving lectures and supporting education sessions such as Animal Behaviour. To enable this to be a meaningful task I make sure we provide up to date details on current research and activities for students and lecturers.

By providing relevant sessions with up-to-date information it is hoped that students will develop suitable, skills which may then link back to Marwell and allow them to develop further research with us, it also enables the students research to be more relevant and valid to the scientific community.

In addition, I organise placements for students and provide professional development to other organisations.

What Qualifications and Skills do you need in your role?

Because my role requires me to deal with higher education institutions and other scientists it is important that I have a PHD. It is a key qualification and ensures that you are respected by other scientists working in research. I did my research for my PHD on captive breeding in big cats.

I did a degree before that in animal behaviour with ecology and conservation. I started out when I was younger wanting to be a vet. I used to volunteer on weekends to try and learn more about the job. In the end I realised that actually working as a vet was less focused on the animals and more on the owners than I thought, which is why I became interested in animal behaviour and research as it was more animal centred. I also did A-level Biology, Chemistry and English before going to university.

You need to be an excellent communicator especially in my role when talking to other scientists. You therefore must also have an excellent understanding of your subject area. You also need to be able to prioritise different tasks on a day-to-day basis.

How did you first start in your role?

When I finished my degree, I got a job in the museum of zoology in Cambridge. I wanted to work with animal behaviour, so I left my paid job to volunteer for a year at Marwell, where I was the enrichment co-ordinator, I worked during the week as a volunteer and weekends in a pub to try and get some money!

During that time, I expressed an interest in doing a PHD linked to Marwell. This was agreed and I was given a small salary. It took a couple of years before I started the PHD which I did part time while working full time at Marwell.

What do you enjoy most about your role?

It sounds obvious and a bit clichéd but the variety of things I am involved in.

These things include my own research on big cat breeding, writing funding bids to get money for projects, developing things such as the Macaque study centre at Marwell. It is very rewarding to help students to develop their own research skills. I have a very busy and flexible job which is very enjoyable. The people I work with really helps too.

What is the most challenging aspect of your role?

Because there are so many different aspects to my job juggling all the different activities is a challenge. You need to be able to prioritise tasks and this sometimes means that your own research ends up having to wait while something else needs to be done.

Sustainability Manager – Duncan East

What are your main duties / responsibilities?

About a third of my time is dealing with issues surrounding ISO14001 which includes site inspections, audits, looking and dealing with waste management issues.

Also increasing the recycling in the park, problem solving and general management duties. Some of my time is built around further development of Marwell's Carbon Footprint Reduction programme.

This involves gathering information on energy usage in the park, for example heating the buildings and animal houses and developing ways to reduce carbon footprint to become more efficient, researching new technologies and alternative systems with a goal of becoming carbon neutral.

Part of my role involves management aspects here at Marwell which would include attendance of various meetings, specific project development and involvement in various planning processes.

I am also involved in outreach programmes and give seminars on sustainability. I am also currently carrying out research for my PhD which involves assessing how Marwell has an impact economically and educationally.

What Qualifications and Skills do you need in your role?

- MSc Environmental Management
- IEMA Lead auditor training
- Understanding of environmental and renewable technologies
- Presentation skills
- General IT – Word, Excel, PowerPoint, ArcGIS, SPSS

How did you first start in your role?

Audited Marwell as an external consultant and realised there was an opportunity for a role to manage environmental impacts.

I Started as part time consultant to implement ISO14001 in 2007 and I went full time from 1/09/2008



What do you enjoy most about your role?

The opportunity to make a real difference, both from 'soft' changes such as influencing behaviour and 'hard' aspects like the solar PV installation and the energy centre.

What's the most challenging aspects of your role?

The people! We have a very wide range of roles which most of our staff do out of personal commitment (well it's not for the money) so persuading them another aspect of Marwell's work is as important as what they do can be tricky.

Over to you

1. Are there any common qualifications that the case studies all have
2. If you were to take 2 of the case studies, what other career options do you think could be available to them?
3. Have you found out anything you were previously unaware of as a potentially pathway you could follow or look into? If so which ones and why?
4. Compile a list of skills the staff have, then consider what other careers these skills would match.
5. Do you think any of these roles could be a good route into another career you have heard of?
6. Which of skills from your list do you currently have? And which are you working towards?
7. Who, from the case studies, do you feel has had the most successful career and why?
8. Of the case studies who do you feel you can most identify with and why?
9. After looking at this project, would you consider looking at a career at Marwell?