

Celtis africana

Sterkfontein Country Estates

March 2014/Maart 2014

Good day friends of the *Celtis* monthly letter!

Slowly but surely, the season is changing – there is already a crispness in the early morning air and sometimes late afternoons is a bit too chilly for our sundowners under the trees – pretty soon we will have to look for a sunny spot to watch all the interesting things animals do at that time of the day!

This month I want to tell you what I found out about the “helicopters” of the insect world! When we had the road-fixing party on Saturday the 8th February 2014, I noticed a lot of bright red and blue dragonflies flying around and took some photos. I remember how, as kids, we used to call them helicopters, because of the way they move about. Ever curious and being the “readaholic” I am, I read up on these colourful insects so I can share a bit of interesting facts about these inhabitants of our Estate with you! And was I surprised about how interesting these little engineers of flight really are!

Dragonflies are mostly found around watery and especially wetland areas as that is where their larvae, called nymphs, remain aquatic for months and in some cases even years! Dragonflies are important predators, as they love insects and especially mosquitoes. They are characterised by their large, multifaceted eyes, elongated body and two pairs of strong, transparent wings. There are 5680 different known species of dragonflies known in the world today! Their main enemies are birds, lizards, frogs, spiders, fish, water bugs, and even other larger dragonflies.

The females lay eggs in or near water, often on floating plants and some species will submerge themselves completely in the water in order to find a suitable place for laying eggs! The eggs hatch into naiads (or nymphs) and this is how most of a dragonfly’s life is spent – as a nymph just beneath the surface of the water. They live by catching other invertebrates such as mosquito larvae, other insects and even vertebrates such as tadpoles and small fish. They do this by way of an extendible jaw.

The naiads (nymphs) breathe through gills in their rectum and when escaping from predators they can rapidly propel themselves by suddenly expelling water through the anus! Oh dear, what a way to go! In smaller species the larval stage may last between two months and three years whilst in larger species up to five years.

When these nymphs are ready to become adults, it will climb onto a reed or other suitable emergent plant, and the exposure to air will cause it to start breathing. The skin will split at a weak spot behind its head and out crawls the adult dragonfly from its larval skin, pumps up its wings, and as soon as the wings are dry enough, flies off!

Amazing facts about the dragonfly:

- Dragonflies are among the fastest flying insects in the world!
- Dragonflies are marvels of aerodynamic engineering - adults beat its two sets of wings out of phase and can control both frequency and amplitude!
- The angle of the wings can be controlled independently, allowing for some astonishing aerial manoeuvres, spectacular hovering and flight in any direction.
- Dragonflies can fly backwards, change direction in mid-air and hover for up to a minute!
- Whilst some insects use the force of gravity to orientate themselves, dragonflies use light. They usually ensure light falls on their backside and if a light is shone from underneath onto a dragonfly, it will fall to earth!
- The very large eyes on top of its head, can freely turn sideways, to the back, to the front and downwards, and are sensitive for any movement, making them the ferocious predators they are!

Source: The Dragonflies and Damselflies of South Africa – Michael J. Samways







And this? Another dragonfly? Nope, it's non other than the adult form of the ant lion. This is another interesting insect one mostly encounters flying feebly around at night, looking for a partner. The name ant lion strictly speaking actually refers to the larva of this insect. There are about 2000 known species worldwide.

Often in a sandy spot one will find a small pitfall and if an ant or small insect scuttles over it, it will fall into this pit and out comes the larva to grab and feed on it! The projections in the jaws of the larva are hollow and through this, the larva will suck the fluids out of its victim.

The life cycle of the ant lion begins with the laying of eggs. The female will repeatedly tap the sand with her abdomen until she finds a suitable spot and will insert her abdomen into the sand to lay an egg. When the larva emits, it is quite ferocious-looking having an enormous pair of sickle-like jaws with several sharp, hollow projections.

Ant lion larvae are unusual among the insects as they lack an anus! Near the end of the pupal stage, all metabolic waste collected and stored during its larval stage, will be emitted as meconium. When the pupal stage is reached, the larva will make a cocoon of sand, stuck together with fine silk spun from a slender spinneret at the posterior end of the body. This may be buried centimetres deep in the sand until the completion of the sexually mature insect. This mature insect emerges from the case, leaving behind the pupal "base" and climbs out to the surface.

How does the ant lion create its pitfall? Now this is *very* interesting! Having marked out the chosen site by a circular groove, the ant lion larva starts to crawl backwards, using its abdomen as a plough to shovel up the soil. With the aid of one front leg, it puts consecutive heaps of loosened sand particles on its head and then with a smart jerk, throws each little pile clear of the scene of operations. It proceeds to gradually work its way from the circumference towards the centre. As it moves round and round, the pit gradually gets deeper. Eventually the slope reaches a point where the sand is on the verge of collapse at the slightest disturbance. Now the pit is completed, the larva will wait at the bottom, buried just beneath the soil and only its jaws projecting above the surface ready for its prey! How very clever!

Mother Nature certainly is interesting and even the smallest part of it - like insects, has a role to play in creating our world. So often we don't notice these small creatures, but after reading up on just these two insect species, I certainly gained new respect for the wonderful world of insects!

Sources: Armstrong, W.P; Wikipedia

[On a lighter note: How many ants do you need to fill an apartment? Tenants!](#)

[What is the biggest ant in the world? Elephant!](#)

[What game does elephants play with ants? Squash!](#)

[Why don't ants get sick? Because they are full of antibodies!](#)

Have a look on your property for these lovely wild flowers in bloom right now.



Gladeolus Permeabilis (Patrysuintjie) Grows among the grasses to a height of about 300-500 mm





Anthericum fasciculatum, a grassland flower, growing up to a height of 600 mm. The flower in the top picture is drooping from the weight of the rainwater





Habenaria caffra, one of our indigenous orchid species. Refer to the page, "Our Orchids" on the SCE website for more details and photographs



John Whillier (SCE127), and two of his workers, with, in the distance, Nic Rosenberg (SCE154) and Garfield Krige (SCE129) discussing the emergency plans to save the first bridge from collapsing



Corrie Botha, and his son, Dean (SCE175) together with Garfield and John hard at work...



Annie de Villiers (SCE124) and Elmarie Krige (SCE129) showing some muscle...



Nic, Corrie and Piet de Villeirs (SCE124)

A group of volunteers helped on the 8th February with some emergency work to drain water off our road to make access a bit easier. This helped for a while ... until the recent rains! However, the appreciation of residents made our hard work worthwhile for the time being!

'n Groep vrywilligers het op Saterdag 8 February bietjie noodwerk aan ons pad gedoen. Dit het grootliks gehelp om die water van die oppervlak te dreineer – maar net tot die onlangse reëns! Die waardering van inwoners het egter die harde werk die moeite werd gemaak tot tyd en wyl!

Goeiedag Celtis-vriende!

Dis alweer 'n nuwe maand en stadig maar seker is die seisoen besig om te verander. Waar ons laatmiddag sit en afkoel het onder die bome, raak dit nou so koel dat ons binnekort 'n sonnige hoekie sal moet opsoek om ons laatmiddagwyntjie te drink! Dis vir ons altyd 'n plesier om daardie tyd van die dag te sien hoe alles stadigaan regmaak vir die nag en is dit nou maar eenmaal 'n seëning om hier te woon.

Nou die Saterdag toe ons klomp bietjie opvulwerk aan die pad gedoen het sien ek die pragtigste helderrooi en blou naaldekokers en net daar besluit ek, ek wil bietjie nalees oor hulle! Kyk bietjie die mooi foto's hierbo wat ek geneem het. Ek is nou eenmaal 'n "leesholis" en leer graag meer van dinge en diere hier op ons Estate. En **is** hulle nou interessante diertjies! Ek onthou hoe ons as kinders hulle helikopters genoem het, omdat hul manewales mens aan 'n helikopter se vliegwyse herinner het!

Naaldekokers word meestal rondom waterareas of vleilande aangetref. Dis ook hier, in die water, waar hul die grootste gedeelte van hul lewe in hul larwestadium (ook genoem nimfe) spandeer – maande lank, soms selfs jare lank! Hierdie predatore eet graag insekte en veral natuurlik muskiete en hul larwes. Naaldekokers word gekenmerk deur hul groot saamgestelde oë wat byna die hele kop vul, verlengde liggaamsgedeelte en 2 paar sterk, deurskynende vlerke.

Sover bekend is daar 5680 verskillende soorte spesies naaldekokers in die wêreld! Hul grootste vyande is voëls, akkedisse, visse, paddas, spinnekoppe, wateroggas en selfs ander, groter naaldekokers.

Die wyfies lê hul eiers in of naby water, soms op 'n drywende waterplant en sommige spesies sal selfs heeltelmal onderwater gaan om 'n geskikte plekkie vir die eier te kry. Die najade of waternimfie wat uitbroei leef meestal net onder die watervlak waar hul wag vir 'n happie om verby te kom. Die nimfie leef van ongewerweldes soos muskietlarwes en ander insekte en selfs soms gewerwelde diertjies soos paddavissies en selfs klein vissies. Die nimf beskik oor 'n verlengde kaak waarmee die prooi gevang word.

Die najade haal asem deur middel van kieuë en as hul wil ontsnap van hul vyand kan hulle hulself vinnig wegsiet deur middel van water wat uitspuit deur hul annale gedeeltes! Sjoë – dis 'n aardige manier van wegkom, ek moet sê! Die larwe stadium duur enigiets van twee maande tot drie jaar in kleiner spesies, en in groter spesies selfs so lank as vyf jaar. Die beskikbaarheid van genoegsame kos beïnvloed hierdie patroon.

Wanneer hierdie nimfe reg is om die volwasse wêreld te betree, sal hul op 'n riet of ander drywende plant klim. Die blootstelling aan suurstof maak dat hulle begin asemhaal. Agter die kop is 'n sagte plek waar die vel dan oopbars en die naaldekoker uitkom. Die vlerke word opgepomp en sodra dit droog genoeg is, vlieg hul die wye wêreld in om ons met hul helder kleure en vliegmanewales te vermaak!

Interessante feite oor naaldekokers:

- Naaldekokers is van die vinnigste vlieënde insekte ter wêreld!
- Naaldekokers is klein wonderwerke van aërodinamiese ingenieurswese – die volwasse insek waai hul twee stelle vlerke onafhanklik van mekaar en het beheer oor die volle omvang en tussenposes van hul vlerkbeweging!
- Die hoekpunt van die vlerke kan onafhanklik van mekaar beheer word wat verbasende lugtoertjies, hangsweef en vliegvermoëns in enige rigting tot gevolg het.
- Naaldekokers kan agteruit vlieg, hul rigting in die middel van vlug verander en kan selfs hang bokant iets vir tot solank as een minuut!
- Sommige insekte gebruik swaartekrag om hulself te oriënteer maar naaldekokers maak gebruik van lig. Hul maak gewoonlik seker dat lig reg op hul rûe val en sou mens 'n lig van onder af op hul skyn sal hul plat op die aarde val!

- Naaldekokers se groot saamgestelde oë reg bo-op die kop kan vrylik kant toe draai, na agter en vorentoe en is baie sensitief vir enige beweging – dis wat hulle die uitstekende jagters maak wat hulle is!

Bron: The Dragonflies and Damselflies of South Africa – Michael J. Samways

Kyk bietjie na die onderste foto – nee, dis nie *ook* 'n naaldekoker nie, maar die volwasse vorm van die mierleeu! Dis nou nog 'n interessante insek waaroor ek gaan nalees het, siende ek 'n foto by ons een visdam geneem het van een wat bietjie poegaai voorgekom het.

As mens in die veld gaan stap kom mens soms in 'n sanderige area af op 'n miniatuur tregtervormige put. Enige mier of ander insek wat kortpad oor die gaatjie neem, of per ongeluk bo-oor hardloop val in – reg in die grillerige kloue van die larwe van die mierleeu! Die uitsteeksels van die mierleeu se kaak is hol en hierdeur word die arme insek leeggesuig en uitgewerp, gereed vir die volgende happie.

Die mierleeu se lewensiklus begin met die lê van eiers. Die wyfie sal aanhoudend met haar abdomen teen die grond klop-klop totdat sy nou 'n geskikte plekkie kry en dan met behulp van haar agterlyf 'n gaatjie in die sand boor en die eier lê! Die larwe wat uitbroei het nogals 'n heel skrikwekkende voorkoms met 'n enorme paar sekelagtige kake met skerp, hol uitsteeksels.

Het jy geweet mierleearwes beskik nie oor annale openinge nie – dit maak hul heel uitsonderlik in die insekwêreld! Aan die einde van die papiestadium word alle metabolies opgaarsels- om dit nou so te stel, uitgewerp as 'n tipe mekonium.

Sodra die larwe die papiestadium bereik, sal dit 'n kokon van sandkorrels maak wat met behulp van ragfyn sy bymekaar gehou word. Hierdie sy word gespin deur 'n spesiale spinorgaantjie wat aan die onderkant van die agterlyf geleë is. Die kokon word dan sentimeters diep in die sand begrawe totdat dit tyd is vir die volwasse insek om uit te kom. Die volwasse vorm soos ons dit ken, sal dan uitkom en die “papiesak” agterlaat en na die oppervlak uitklim.

Wat nou baie interessant is, is hoe die larwe die tregtervormige vanggaatjie maak. Die gekose plek word gemerk met 'n sirkelvormige groeflyn. Dan, agteruit - let wel, begin die larwe met die onderlyf as 'n tipe “ploeg” die grond stelselmatige losgrou. Met behulp van een voorpoot word die los grond nou bo-op die kop gestapel en hierdie sand word dan met 'n baie slim beweging van die kop weg van die gaatjie gewerp! So werk hy dan stelselmatig al in die rondte om die vanggat te maak en soos dit al in die rondte werk, word die put dieper. Uiteindelik sal die tregter 'n stadium bereik waar dit amper inmekaar kan tuimel en dis dan wat meneer inkruip en wag vir die prooi. Die larwe skuil net-net onder die grond met gewoonlik net die lelike kake wat uitsteek, gereed om enige happie te gryp! As dit darem nou nie slim is nie, dan weet ek nie!

Die natuur is beslis interessant en ek het sommer nou van voor af respek gekry vir die insekswêreld. Mens is geneig om insekte mis te kyk omdat hulle so klein is, en tog het elkeen sy plek in die natuur en hul doen en late is meestal klein ingenieurswonderwerke!

Bronne: Armstrong, W.P.; Wikipedia

Net vir die grap:

3 miere sien 'n olifant aangestap kom.

Mier 1 sê: "Kom ons maak hom dood."

Mier 2 sê: "Kom ons breek sy bene."

Mier 3 sê: "Ag nee ouens, kom ons los hom. Hy is net 1 en ons is 3."

Vyf blondines stap by 'n kroeg in, bestel 'n rondte drankies. Hulle lig hulle glase en die een skree "op 51 dae" - die ander antwoord "51 dae". Later bestel hulle nog 'n rondte, en na 'n ruk weer 'n rondte, en elke keer is dit "op 51 dae". Die kroegman se nuuskierigheid raak te veel vir hom, en hy vra vir die 'hoofblondine' waarom die 51 dae storie gaan. Sy antwoord hom: "ons vyf het nou net 'n legkaart klaargebou. Op die boks staan 2 tot 4 jaar, maar ons is baie trots op onself, want ons het hom in net 51 dae klaargebou!"

Tot volgende maand: Totsiens, goodbye, adios, ciao, yia sas en do svidaniya!

