

This article relates to an incident that did NOT occur at Scouts however Scouts NSW may have the same or similar equipment

Here is a notification from a supplier regarding an incident (non-Scouts) on a piece of activity equipment called a Centipede. A 6 year old boy was belayed successfully and escaped serious injury when the cable snapped.

The incident offers learnings for Scouts NSW for other equipment. The investigation found that the equipment had been misused at some stage - the Centipede had been twisted/wound many times from the ground in order to create a spinning motion of the Centipede when it was let go. This twisting/winding motion caused the strands of the attachment cable at the top of the centipede to twist open. This resulted in individual wires bending and breaking on a later occasion.

There are learnings here for any type of activity equipment that is open to possible misuse. Misuse can be linked to lack of supervision or out of hours 'unauthorised' use of equipment. So please circulate to the relevant people in your region or centre so they are aware and can consider what improvements (if any) can be taken to protect equipment for misuse, or alternatively what additional inspections are feasible.

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Wire Rope Breakage on Centipede Activity

On 24/6/19 at 4:40pm, it was brought to the attention of Project Adventure Australia (PAA), that a wire rope (cable) which was the primary attachment for a Centipede activity, broke, resulting in the Centipede falling to the ground.





On 24/6/19 at 4.30pm, the activity was being climbed by a year 6 male when the Centipede attachment cable failed. The participant was being dynamically belayed at the time and was immediately lowered to the ground.

The participant received a small bruise to his arm and was able to continue attendance at the camp and participate in all other activities.

The activity was immediately closed and Project Adventure Australia notified of the incident.

PAA representative, Steve Whitmore, visited the site the following morning, 25/6/19, to assess what caused the failure of the wire rope.

Activity History

The Centipede is a series of logs that are attached to each other, end to end, and hung vertically. Starting at ground level, participants ascend the logs via staples or climbing holds to see how high they can climb.

The Centipede Activity in this instance was installed in 1999 or 2000. This site has two Centipedes that hang approximately 4 metres apart. They are approximately 8 - 9 metres long and are hung between the same two trees. The centipedes are

suspended from a horizontal support cable with a belay cable located approximately 80cm above the activity. Modifications to the Centipedes primary attachment points were carried out in 2013.

This activity has been inspected on an annual basis since its initial installation. The last inspection was performed in October 2018.



Findings

The determined reason for the failure of this wire rope was - misuse of the activity.

At some point, prior to the failure of the wire rope, the Centipede was twisted/wound many times from the ground in order to create a spinning motion of the Centipede when it was let go. This twisting/winding motion caused the strands of the attachment cable at the top of the centipede to twist open. This resulted in individual wires bending and subsequently breaking. Owing to the length of the Centipede, the leverage and torque achieved led to many of the individual wires and strands breaking.

The damage caused to the Centipede was more than likely unknown to the perpetrators, as the activity continued to hang as normal.

The Centipede continued to be used as the damage caused by misuse was undetected by centre staff since the attachment point is difficult to see from ground level. The usual movement of the activity caused the remaining wires to break and the Centipede to fall.





Photos from broken centipede.

When I inspected the second centipede on the same day, it showed the initial signs of similar misuse with a few broken wires evident from similar winding/twisting. I went on to twist the Centipede another 3 times, noting that wires continued to break as I twisted.



This photo is the attachment point of the second centipede.

It cannot be determined by the site managers when this misuse occurred. Twisting or winding of the Centipede could have occurred whilst the activity was in general use or when the activity was unsupervised.

Why you are receiving this email

Our records indicate that PAA has installed and/or inspected a Centipede activity at your site some time in the past 20 years.

The intention of this email is to advise our clients of this incident to prevent similar occurrences to other Centipede activities.

There is no need to discontinue the use of this activity unless you suspect you have had a scenario occur similar to the one described above, since your last annual inspection.

If you have any concerns please follow the steps outlined below.

Steps to follow if concerned -

1. Visually inspect the cable that attaches the Centipede to the horizontal support cable, or in some instances an eye bolt. Pay particular attention to the cable between the 2 swages, as indicated by the arrow in the drawing below.

Please Note - Your Centipede may have a different type of attachment point. If this is the case you should be OK to continue operation of your activity.

2. If there are any broken wires, take a photo and forward it to the email address above.

3. A PAA representative will call you to determine a course of action to follow.

If everything appears satisfactory, your Centipede should be safe to use.