

The farmers using drones to watch their flocks by flight

Level 3 • Advanced

1 Warmer

Match the animals with the sounds they make.

- | | |
|-----------|----------|
| 1. dogs | a. howl |
| 2. cattle | b. miaow |
| 3. cats | c. bleat |
| 4. wolves | d. bark |
| 5. sheep | e. neigh |
| 6. horses | f. moo |

2 Key words

Fill the gaps in the sentences using these key words from the text.

trough
treat

outpace
herd (noun)

gully
stag

flock
ewe

herd (verb)
doe

1. A _____ is a group of sheep, goats or birds.
2. If you _____ animals, you make them move together as a group to another place.
3. A _____ is a large group of animals of the same type that live and move about together.
4. If you _____ someone, you move faster than them.
5. A _____ is a female deer.
6. A _____ is a long narrow valley with steep sides.
7. A _____ is a male deer.
8. A _____ is something special you give someone.
9. A _____ is a female sheep.
10. A _____ is a long narrow open container used for holding water or food for animals.

3 Find the information

Find the following information in the text as quickly as possible.

1. Where is Jason Rentoul based?
2. Where did he get the idea to use a drone to herd sheep?
3. Which animals can become aggressive around sheepdogs?
4. Why did Corey Lambeth originally purchase a drone?
5. How long did it take Lambeth to find out his cattle's water trough had been knocked over?
6. How many sheep does Wojtek Behnke have?

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Sky shepherds: the farmers using drones to watch their flocks by flight

For some farmers in New Zealand, Britain and Australia, drones are not just a toy – they're an increasingly vital tool

Alyx Gorman

26 December, 2019

- 1 A shepherd is out tending a flock when a presence appears above. It descends from the sky and communicates vital information. It may sound like a Christmas scene, but for an increasing number of farmers, it's a daily occurrence – and that presence in the sky is a drone.
- 2 Corey Lambeth, a New Zealand farmer, originally purchased a drone for photography, but he quickly realized the device had more practical applications. "I thought, 'I'll just give it a go on the sheep and see what that goes like', and it actually worked out quite well," he says. Now Lambeth has been using a drone "pretty much as another dog" to herd sheep for three years.
- 3 "It's a significant time-saving when herding," says Jason Rentoul, a farmer based in Marlborough, New Zealand, who has been using drones with herds of sheep, deer and cattle for three years. "Some herdings might take four men with a minimum of two dogs each, and now, with a drone, you can do that with two men and considerably less time."
- 4 It took a fair bit of experimentation to get to this point. Rentoul purchased his first drone after watching a video of another farmer using one to herd deer on YouTube. In the early days, he lost drones to water damage and once, memorably, while trying to transport a bottle of wine. He tied the bottle to the drone with fishing line, but it would "swing side to side". The drone would try and correct for the wine's movement "and the bottle would swing one way and the drone would try to balance," making the wine swing faster and faster, until he eventually lost control altogether.
- 5 "I now try and keep it fairly simple and low cost," he says. Rentoul finds the drone particularly helpful when herding deer. Unlike a sheepdog, a drone can outpace a bolting doe. The drone also works well for cattle with calves, which tend to get aggressive around sheepdogs.
- 6 That's not the only way his dogs have benefitted from aerial assistance. "They work together, the dog and drone. It was surprising how quickly the dogs figured it out. At first some of the dogs didn't like the drone and they'd snap at it and bark at it, but very quickly they realized that the drone was there to help them. Sometimes they'll have to run a kilometre through a gully to get to a flock of sheep, and they seem to find the stock quicker because they can hear the drone and know it'll be working ahead of them." The dogs will also stand under the drone when they're feeling threatened by stags or cattle. "That's their safe place because the stock won't come near the drone."
- 7 Lambeth, too, has learned to innovate. After a period of successful herding, his flock became used to the drone and stopped responding to its presence. So he got creative. He recorded audio of his dogs barking and now plays that sound through the drone. "It's quite a laugh seeing the drone flying around, barking at the sheep."
- 8 Wojtek Behnke, an English farmer based in Shropshire, is taking a different approach. Rather than using his drone as a sheepdog, he is treating it like a pied piper. After watching videos of sheep being herded by drone in New Zealand, Behnke became curious and bought his own. Now he's involved in the world's first "positive-association" study using drones, being conducted by Harper Adams University.
- 9 Behnke separated a group of five sheep from his flock and got them used to his drone. Once the sheep were happy, he started creating positive associations. He would hide behind hedges, throwing special treats under the drone's path. When the sheep had learned that the drone brought them treats, he introduced them back to the flock. "Within a couple of weeks, I had all 100 following the drone." Now all 300 of Behnke's sheep can be led by a drone over short distances. "It seems to be quite an enjoyable experience for them. I've seen ewes bouncing up like lambs into the air on the videos. They get quite excited about it."
- 10 Behnke believes this can have an impact on the sheep's quality of life. "We measure 'a life worth living' by how many positive experiences they have throughout their lifetime and how many negative. The more positive, the more their life is worth living. I imagine being chased by dogs and being pushed around is probably less enjoyable than following something around, thinking 'Oh this is fun; I might get something at the end of it'."

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11 While drones make great companion tools to use with sheepdogs and other traditional ways of herding, all the farmers spoken to for this story agree that the biggest advantage of using them is for monitoring. Drones act as an affordable set of eyes in the sky, making checks on stock and crops faster and more detailed – without having to disturb the animals.

12 Lambeth was particularly thankful for his drone one Christmas Eve. “Me and my partner were

sitting out having a barbecue, and we could hear the cows mooing.” Previously, it would have ruined their night “driving out to each individual paddock to figure out what the problem was.” Instead, “I sent the drone out, and I could see their water trough had been knocked over. It only took me 30 minutes.” It was a modern miracle.

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4 Comprehension check

Choose the best answer according to the text.

- What, according to Jason Rentoul, is the main benefit of using a drone to herd animals?
 - It is cheaper.
 - It is helpful when herding deer.
 - It is less time-consuming.
- How have his dogs reacted to the drones?
 - They bark at them.
 - They have got used to the drones and work together with them.
 - They feel threatened by them if they stand under them.
- How did Wojtek Behnke get his sheep used to his drone?
 - He hid behind hedges.
 - He made them realize that it was more fun than being chased by dogs.
 - He created positive associations with the drone by giving the sheep treats.
- What do all the farmers spoken to for the story agree?
 - that the biggest advantage of using drones is for monitoring
 - that the biggest advantage of using drones is they are more reliable than dogs
 - that the biggest advantage of using drones is that they are cheap

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5 Find the word

Find the following words and phrases in the text.

1. a noun meaning *the process of testing various ideas, methods or activities to see what effect they have* (para 4)
2. a verb meaning *run in a sudden way because you are frightened* (para 5)
3. a noun meaning *animals such as cows and sheep that are kept on a farm* (para 6)
4. a verb meaning *invent or begin using new ideas, methods, equipment etc* (para 7)
5. a two-word noun phrase meaning *someone who encourages other people to follow them* (para 8)
6. a verb meaning *move up and down as if on springs* (para 9)
7. an adjective meaning *cheap enough for ordinary people to buy* (para 11)
8. a noun meaning *a small field where animals are kept* (para 12)

6 Two-word phrases

Match the words in the left-hand column with those in the right-hand column to make expressions from the text.

- | | |
|--------------|----------------|
| 1. practical | a. out |
| 2. positive | b. occurrence |
| 3. figure | c. information |
| 4. time- | d. association |
| 5. daily | e. application |
| 6. vital | f. saving |

7 Word-building

Fill the gaps in the sentences with the correct form of the word in brackets at the end of each sentence.

1. Following a drone seems to be quite an _____ experience for some sheep. [ENJOY]
2. Jason Rentoul _____ lost a drone when trying to transport a bottle of wine. [MEMORY]
3. Drones can be particularly _____ when herding sheep. [HELP]
4. Using a drone takes _____ less time than using men and dogs. [CONSIDER]
5. One Christmas Eve, Corey Lambeth was particularly _____ for his drone. [THANK]
6. Jason Rentoul's dogs have benefitted from the aerial _____ provided by his drones. [ASSIST]

8 Discussion

Discuss the statements.

- Drones are dangerous and should only be used by licensed professionals.
- Drones are an intrusion into people's privacy.
- Criminals will find drones very useful.

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KEY

1 Warmer

1. d
2. f
3. b
4. a
5. c
6. e

2 Key words

1. flock
2. herd (verb)
3. herd (noun)
4. outpace
5. doe
6. gully
7. stag
8. treat
9. ewe
10. trough

3 Find the information

1. Marlborough, New Zealand
2. from a YouTube video
3. cattle with calves
4. for photography
5. 30 minutes
6. 300

4 Comprehension check

1. c
2. b
3. c
4. a

5 Find the word

1. experimentation
2. bolt
3. stock
4. innovate
5. pied piper
6. bounce
7. affordable
8. paddock

6 Two-word phrases

1. e
2. d
3. a
4. f
5. b
6. c

7 Word-building

1. enjoyable
2. memorably
3. helpful
4. considerably
5. thankful
6. assistance