

# Ecosystem Services of Sika Deer Hunting



**Lincoln  
University**  
*Te Whare Wānaka o Aoraki*  
CHRISTCHURCH • NEW ZEALAND



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Forest Ecosystem Services Forum, Te Papa, Wellington

9 May 2013

New Zealand's specialist land-based university

# Sika deer

- Largely indigenous forest in Kaimanawa & Kaweka ranges
- Significant recreational resource
  - Provisioning services
  - Cultural services
- Negative effects on beech forest
  - Regulating services



[www.poronui.com](http://www.poronui.com)



# Provisioning Services

- Commercial food harvest
  - Little direct commercial harvest
  - Some guided recreational “meat hunts”



## Introduction

*New Zealand Premium Game Meat – Mountain Bred, Naturally Wild*

**Premium Game Ltd**  
Bristol Street  
Riverlands Estate  
Blenheim  
Ph (03) 577-8200  
Fax (03) 577-8205  
Email: [info@game-meats.co.nz](mailto:info@game-meats.co.nz)

*New Zealand Premium Game Meats,  
suppliers of the finest of New Zealand Game Meat*

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Without doubt the best-flavoured game-meat is from wild animals. New Zealand has a wide range of introduced game animals which can be hunted, and which are processed by Premium Game for the New Zealand domestic market

Wild game meats tend to be darker in colour than farmed meats. Animals are of course not drenched or sprayed making it a truly natural product free from residual chemicals.

Premium Game supply a variety of high quality wild game meats, including venison, wild pork, goat, thar, hare, rabbit and wallaby.

By controlling introduced game species, New Zealand's high country environment is improved. Premium Game's operation has no negative effect on the environment.

Premium Game supply their game meat to a range of customers. These include some of the finest restaurants, and the most discerning supermarkets in New Zealand.

## NGAMATEA

GUIDED HUNTING & FISHING



## MANAGEMENT HUNTS

\$700/day includes food, guide and gear for 2 people

Plus \$200/animal harvested “No Bang No Bucks”

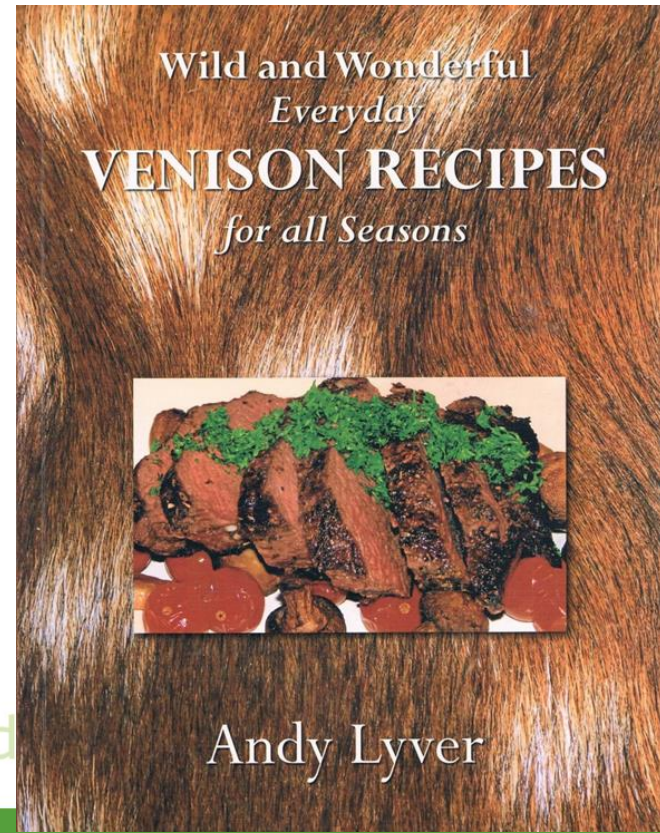
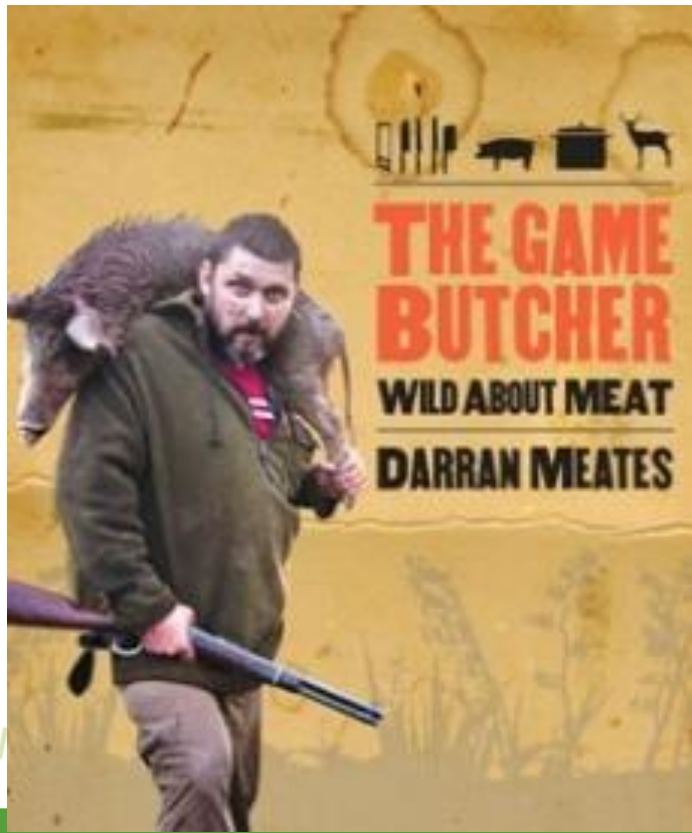
*(We guarantee each party the chance of a shot on a Management animal during a 2 day hunt or you pay Nothing)*

Phone Bruce on 021 459 495 | Email : [hunt&fish@ngamatea.co.nz](mailto:hunt&fish@ngamatea.co.nz)



# Provisioning Services

- Recreational food harvest
  - May be commercially processed
  - Most is DIY



# Provisioning Service Value?

- Typical online retail prices of farmed Red deer venison (14 April 2013)
  - \$40 - \$80 kg<sup>-1</sup> for prime cuts
  - \$20 kg<sup>-1</sup> for diced meat
  - \$14 kg<sup>-1</sup> for sausages
  - \$11kg<sup>-1</sup> for mince
- But wild sika is a different product ....
  - Reputedly, Sika venison is tastier than Red Deer venison
  - It's wild, not farmed
  - Butchery quality may be lower!



Venison Denver Leg  
~~Was \$58.00/Kg~~  
Now \$44.00/Kg



Venison Shortloin  
\$79.75/Kg



Venison French Rack  
\$78.25/Kg



Venison Tenderloin  
\$75.55/Kg

# Provisioning Service Value?

- Say \$40 kg<sup>-1</sup>
- ≈ 12 kg of meat recoverable sika<sup>-1</sup>
  - ⇒ \$480 deer<sup>-1</sup>
- ≈ 15,000 - 25,000 sika killed year<sup>-1</sup> (Kerr & Abell, 2012)
  - ⇒ **\$7m - \$12m year<sup>-1</sup>** if all meat is recovered

Recoverable meat based on estimates of Fallow deer meat recovery at Bromley's Home Butchery Ltd. (pers. comm.). Fallow are of similar size to sika.



# Cultural Services

- Some commercially guided hunting



- GLAZEBROOK HUNTING
- SIKA HUNTING
- RED STAG HUNTING
- RUSA HUNTING
- SAMBAR HUNTING
- FALLOW DEER HUNTING
- ELK HUNTING

## SIKA HUNTING

### Sika Hunting in New Zealand

The sika's reputation as being among the most cunning of deer is well deserved. At times it would seem they have eyes in the back of their heads never mind an ability to disappear without the slightest noise.

On the other hand they are incredibly aggressive and vocal during the rut-characteristics that can leave them vulnerable at this time. It also makes for exciting hunting. Their high pitched roars, combined with the crash of antlers as stags fight, will give even the most experienced hunter a mega dose of buck fever.

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### Guided Sika Hunts

#### Sika Hunting, Wilderness Block

##### Free Range SIKA

NZ \$2850 each hunter total \$5700

(includes food, accommodation, helicopter, and guide)

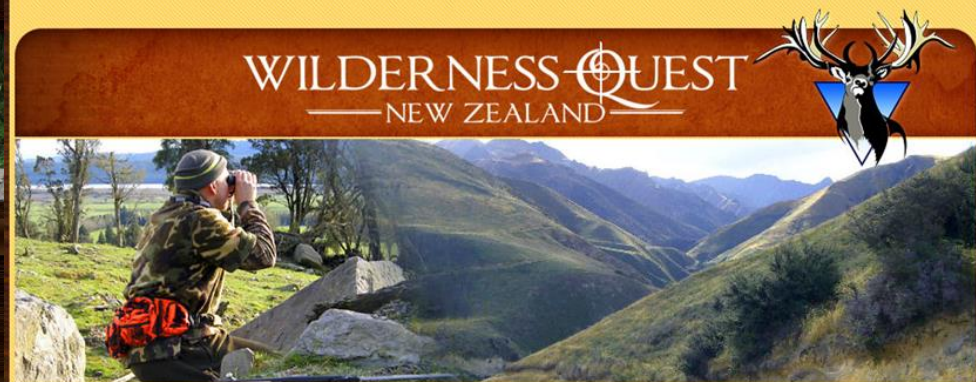
This is a fly in helicopter Sika **Free Range** hunt. I have exclusive right to this area so no one else can hunt this block. We will fly into the back country to a basic back country hut with a shower and flush toilet.

I only do 9 hunts a year on this block giving each party a good chance of success.

This option is best suited to 2 hunters wanting a Sika.



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### Game Hunts

- Red Stag
- Fallow Buck
- Arapawa Ram
- Tahr / Chamois
- Whitetail Buck

#### Sika Stag Hunts

Hunt the wily sika deer in the central North Island of New Zealand. Both free range and preserve hunts available in idyllic settings. Stay in modest lodgings with the guide on the hunting block (at no extra cost) or retire to the Millennium motel in nearby Lake Taupo where local trout fishing is superb.



# Cultural Services

- Private hunting
- Diverse motivations
  - Trophy
  - Meat
  - Seeing animals
  - Social
  - Experiencing the outdoors



East Kaweka Helicopters





# Cultural Service Value

- Value to HUNTERS (not to businesses servicing hunters)
- Kerr & Abell – 2012 choice experiment
  - ≈ \$250 hunter<sup>-1</sup> day<sup>-1</sup>
  - cf. 57 study international mean for deer hunting = \$246 day<sup>-1</sup> (SE=\$36)  
[Kerr & Woods, 2010]
  - ≈ 15,000 - 25,000 sika killed year<sup>-1</sup>
  - ⇒ 75,000 – 130,000 sika hunter-days year<sup>-1</sup> (0.19 kills/day)
  - ≈ **\$19m - \$32m year<sup>-1</sup>**

## Nugent – 1988

- ≈ 53,000 sika hunter-days year<sup>-1</sup> (SE=12,500)
- ≈ 16,450 sika killed year<sup>-1</sup> (SE=3,830)

# Conclusions

- Recreational Sika deer hunting yields significant ES benefits
  - Provisioning: possibly up to \$12m pa
  - Cultural: \$19m - \$32m pa
  - In addition, recreational hunting creates significant market economic impacts through purchases of gear, transport, and guiding services
    - Mean expenditure for big game hunters  $\approx$  \$3,700 p.a. (excluding transport)
- Potential double counting



# Conclusions cont.

- Improved deer/hunter management might increase provisioning and cultural ES values, but what effect on regulating ES values?
- Or ....
- Improved forest management might increase regulating ES values, but what effect on provisioning and cultural ES values?
- The ES framework invites simultaneous consideration of all ES effects

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[www.lincoln.ac.nz/hunt](http://www.lincoln.ac.nz/hunt)

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