

Wildlife Genetics Proficiency Testing Program –Test # 021914

Consensus Report 07/25/2014

 Test Start Date
 -02/19/2014

 Test Due Date
 -04/25/2014

This document reports the results of the Wildlife Genetics Proficiency Testing Program. The National Fish and Wildlife Forensic Laboratory was the duty Lab and was responsible for sample preparation, sample verification, distribution, and gathering and reporting the results.

The results are self explanatory and are divided into three sections:

- 1. Results of Test for Species Origin
- 2. Results of Determination of Gender Origin
- 3. Results of Individual Identification

Each section contains the following:

- 1. The species source that you identified for Items 1, 2 and 3.
- 2. The methods used to make these identifications.

Scenario

A Wildlife Agent is investigating a poaching incident involving white-tailed deer. The suspect claims the meat in his freezer is coming from one white-tailed deer. All three tissue samples were recovered from the suspect's freezer.

The Agent requests that the species and gender origins of all submitted evidence be determined. He is also interested in knowing whether the three submitted evidence items are from the same individual animal. It is not known where the poaching incident occurred.

Items Submitted

Item 1: Tissue from suspect's freezer. Item 2: Tissue from suspect's freezer. Item 3: Tissue from suspect's freezer.

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Wildlife Genetics Proficiency Testing Program Answers:

	Item 1	Item 2	Item 3
Species Origin	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus
			virginianus)
Gender Origin	Male	Male	Male
Accession No.	QA3H41-QA3H81	QA3H41-QA3H81	QA3A72-QA3B20
Provider	USDA/APHIS - WS	USDA/APHIS - WS	Idaho Fish and Game
Original ID	ID#24965,	ID#24965,	GMU 3, Fernan Lake,
	Sixes Unit, OR	Sixes Unit, OR	Panhandle Region

Items 1 and 2 are from the same individual

The results of pre-distribution testing confirmed the expected results.



I) Compilation of Species Origin Results

1 Species Source

Lab	Item 1	Item 2	Item 3
I3K48M-1	Ursus americanus	Ursus americanus	Odocoileus sp.
I3K48M-2	Ursus americanus	Ursus americanus	Odocoileus virginianus
M3B22N	Ursus americanus	Ursus americanus	Deer of Genus Odocoileus
			(WTD/MD)
J4L18F	American Black Bear	American Black Bear	Deer of Genus Odocoileus
	(Ursus americanus)	(Ursus americanus)	
B5H06W	Ursus americanus	Ursus americanus	Deer of the
			Genus Odocoileus
D6S24F	Ursus americanus	Ursus americanus	Odocoileus
S2F23G	Ursus americanus	Ursus americanus	Odocoileus sp.
	North American Black Bear	North American Black Bear	
R2J94A-1	Black Bear	Black Bear	Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus sp.)*
			* Deer species not
			determined due to lack of
			geographic information
R2J94A-2	Black Bear	Black Bear	Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus sp.)*
			* Deer species not
			determined due to lack of
			geographic information
R2J94A-3	Black Bear	Black Bear	Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus sp.)*
			* Deer species not
			determined due to lack of
			geographic information
B1V83W	North American Black Bear	North American Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
P2W87T-1	Ursus americanus	Ursus americanus	Odocoileus virginianus
	(American Black Bear)	(American Black Bear)	(White-tailed Deer)
P2W87T-2	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
K2R46H	American Black Bear	American Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
D3H13G-1	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
D3H13G-2	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
D3H13G-3	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)

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C3F65S	Ursus americanus	Ursus americanus	Odocoileus virginianus
MIS68R	Black Bear	Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
B4W11V-1	Black Bear	Black Bear	White-tailed Deer
B4W11V-2	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
B4W11V-1	Black Bear	Black Bear	White-tailed Deer
B4W11V-3	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
J2R15F-1	Ursus americanus	Ursus americanus	Odocoileus virginianus
	(Black Bear)	(Black Bear)	(White-tailed Deer)
J2R15F-2	American Black Bear	American Black Bear	White-tailed Deer
	(Ursus americanus)	(Ursus americanus)	(Odocoileus virginianus)
K1W95S-1	Ursus americanus	Ursus americanus	Odocoileus sp.(Deer), most
K1W95S-3	(American Black Bear)	(American Black Bear)	likely White-tailed Deer
			(Odocoileus virginianus)*
			Based on WDFW Baseline
K1W95S-1	Ursus americanus	Ursus americanus	Odocoileus sp.(Deer), most
K1W95S-4	(American Black Bear)	(American Black Bear)	likely White-tailed Deer
			(Odocoileus virginianus)*
			Based on WDFW Baseline
K1W95S-2	Black Bear	Black Bear	Deer (Odocoileus spp.)
K1W95S-3	(Ursus americanus)	(Ursus americanus)	
K1W95S-2	Black Bear	Black Bear	Deer (Odocoileus spp.)
K1W95S-4	(Ursus americanus)	(Ursus americanus)	
R4R65C-1	Ursus americanus	Ursus americanus	Odocoileus sp.
R4R65C-2			
R4R65C-3			
C3F54C	Ursus americanus	Ursus americanus	Odocoileus
B4C27D	Ursus americanus	Ursus americanus	Odocoileus virginianus
R9H57A	Ursus americanus	Ursus americanus	Odocoileus sp.
J3V67H	Ursus americanus	Ursus americanus	Odocoileus virginianus
R1J97A-1	Ursus americanus	Ursus americanus	Odocoileus sp.*
			*Insufficient resolution
			between O. hemionus and
			<i>O. virginianus</i> using our
			std. protocols and gene
			region
R1J97A-2	Ursus americanus	Ursus americanus	Odocoileus sp.*
			"WIEGA 5.05
			Using an NJ tree with 1000
			bootstraps samples of
			Odocoileus hemionus and
			<i>Oaocoileus virginianus</i>
			were unresolved (cyt B).
1	1		A tull study using multiple

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			mt & nuclear genes was not attempted. n=10 O. virginianus n=30 O. hemionus
R1J97A-3	Ursus americanus	Ursus americanus	Odocoileus sp. * *Unable to resolve differences between O. virginianus and O. hemionus using the markers available

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2 Methods Used

Lab	Methods/ Genetic Marker(s)		
I3K48M-1	DNA Sequence Analysis/ mtDNA d-loop		
I3K48M-2	DNA Sequence Analysis/ mtDNA d-loop, Bexon 4		
M3B22N	DNA Sequence Analysis/ Portion of mtDNA Cyt b		
J4L18F	DNA Sequence Analysis/ Sequencing of Cyt-b region		
	STR Analysis/ Amp of 10 microsat bear markers		
B5H06W	DNA Sequence Analysis/ Portion of Cyt B & Control Region gene		
D6S24F	DNA Sequence Analysis/ Cytochrome b gene sequencing		
S2F23G	DNA Sequence Analysis/ mtDNA cytochrome b, 5' portion		
R2J94A-1	DNA Sequence Analysis/ Fragment of 16S ribosomal RNA gene		
	STR Analysis/ STR results used to confirm sequence results		
R2J94A-2	DNA Sequence Analysis/ Fragment of 16S Ribosomal RNA gene		
	STR Analysis/ Used to confirm sequence		
R2J94A-3	DNA Sequence Analysis/ 16S ribosomal RNA gene fragment		
	STR Analysis/ Used to confirm sequence results		
B1V83W	Isoelectric Focusing/ PGI, SOD & Esterase		
P2W87T-1	DNA Sequence Analysis/ Analysis of cytochrome b gene within mtDNA		
P2W87T-2	DNA Sequence Analysis/ Analysis of Cyt B gene mtDNA		
K2R46H	Immunodiffusion/ Ouchterlony		
	Isozyme Analysis/ PGI, SOD & EAP Isoelectric Focusing		
D3H13G-1	Isoelectric Focusing/ Phosphoglucose Isomerase and Albumin		
	Counter Immunoelectrophoresis		
D3H13G-2	Isoelectric Focusing/ Phosphoglucose Isomerase and Albumin		
	Counter Immunoelectrophoresis		
D3H13G-3	Isoelectric Focusing/ Phosphoglucose Isomerase and Albumin		
	Counter Immunoelectrophoresis		
C3F65S	Isoelectric Focusing/ Phosphoglucose Isomerase, Albumin		
	Counter Immunoelectrophoresis		
M1S68R	Immunodiffusion/ Ouchterlony - Deer and Bear anti-serums		
	Isoelectric Focusing/ PGI (IEF3-9); EAP (IEF5-8)		
B4W11V-1	DNA Sequence Analysis/ tRNA and Cytochrome b genes		
B4W11V-2	STR Analysis/ FCB193		
B4W11V-1	DNA Sequence Analysis/ tRNA and Cytochrome b gene		
B4W11V-3	STR Analysis/ FCB193		
J2R15F-1	Immunodiffusion/ Ouchterlony (Anti-Cervid & Anti-Bear)		
	Isoelectric Focusing/ PGI & EAP with Phast System		
J2R15F-2	Immunodiffusion/ Ouchterlony using Cervid & Ursid antisera		
	Isoelectric Focusing/ PGI & EAP with Phast System		



1	
K1W95S-1	DNA Sequence Analysis/ 12s rRNA
K1W95S-3	
K1W95S-1	DNA Sequence Analysis/ 12s rRNA
K1W95S-4	1 2
K1W95S-2	DNA Sequence Analysis/ 12s rRNA mtDNA sequencing
K1W95S-3	
IXI (1755 5	
K1W058 2	DNA Sequence Analysis/ 12c rDNA mtDNA coquencing
KIW935-2 KIW055 4	DIVA Sequence Analysis/ 12s IKINA midDIVA sequencing
K1W95S-4	
R4R65C-1	DNA Sequence Analysis/ Cytochrome B
R4R65C-2	
R4R65C-3	
C3F54C	DNA Sequence Analysis/ Cytochrome b
B4C27D	DNA Sequence Analysis/ COI, Cyt B Sequence Blast
	STR Analysis/ Whitetail Deer PCR panel
R9H57A	DNA Sequence Analysis/ Cytochrome b gene - Sanger Sequencing
J3V67H	DNA Sequence Analysis/ Cytochrome b, Subunit 1 sequencing
R1J97A-1	DNA Sequence Analysis/ mtDNA Sequencing (Cyt b, COI panel gene region)
R1J97A-2	DNA Sequence Analysis/ COI & Cyt B Sequencing, DB Searches. Assessment. Tree
	Analyses
R1J97A-3	DNA Sequence Analysis/ mtDNA COI and Cyt b Sequencing Analyses



II) Compilation of Gender Origin Results

1 Gender Origin

Lab	Item 1	Item 2	Item 3
I3K48M-1	Male	Male	Male
I3K48M-2	Male	Male	Male
M3B22N	Male	Male	Male
J4L18F	Male	Male	Male
B5H06W	Male	Male	Male
D6S24F	Male	Male	Male
S2F23G	Male	Male	Male
R2J94A-1	Male	Male	Not done*
			* Test not performed because
			it is not validated for
			casework
R2J94A-2	Male	Male	NA
R2J94A-3	Male	Male	NA
B1V83W	Male	Male	Male
P2W87T-1	Male	Male	Inconclusive*
			Degraded DNA sample
P2W87T-2	Male	Male	NA*
			Possible degradation,
			samples sat at border
			(Canada/US) for a couple of
			days without refrigeration
K2R46H	Male	Male	Male
D3H13G-1	Male	Male	Male
D3H13G-2	Male	Male	Male
D3H13G-3	Male	Male	Male
C3F65S	Male	Male	Male
M1S68R	Male	Male	Male
B4W11V-1	Male	Male	Male
B4W11V-2			
B4W11V-1	Male	Male	Male
B4W11V-3			
J2R15F-1	Male	Male	Male
J2R15F-2	Male	Male	Male
K1W95S-1	Male	Male	Male
K1W95S-3			
K1W95S-1	Male	Male	Male
K1W95S-4			
K1W95S-2	Male	Male	Male
K1W95S-3			

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K1W95S-2 K1W95S-4	Male	Male	Male
R4R65C-1 R4R65C-2 R4R65C-3	Male	Male	Male
C3F54C	Incomplete	Incomplete	Male
B4C27D	Male	Male	Male
R9H57A	NA	NA	NA
J3V67H	Male	Male	Male
R1J97A-1	NA	NA	NA
R1J97A-2	NA	NA	NA
R1J97A-3	NA	NA	NA



2 **Methods Used**

Lab	Methods/ Genetic Marker(s)		
I3K48M-1	ZFX/Y amplimers		
I3K48M-2	PCR ZFX/Y amplimers		
M3B22N	PCR amplification of electrophoretic detection of portions of the ZFX/ZFY and SRY genes		
	on sex chromosomes of mammals		
J4L18F	PCR amplification of ZFX/Y and SRY		
B5H06W	PCR and electrophoresis detection of ZFX/ZFY and SRY genes		
D6S24F	PCR amplification of ZFX ZFY and SRY of the sex chromosomes in mammals		
S2F23G	Multiplex PCR of SRY HMG region & portion of ZFY last exon		
R2J94A-1	Fragment analysis using a primer set for Bovine Amelogenin		
R2J94A-2	Microsatellite analysis of Bovine Amelogenin		
R2J94A-3	STR analysis - Bovine Amelogenin markers		
B1V83W	Amplification of portions of ZFX/Y & SRY Genes		
P2W87T-1	PCR amplification of ZFX/ZFY region on X + Y chromosomes. PCR product was run on an		
	agarose gel to determine gender (2 bands=male, 1 band=female). Amelogenin is also		
	amplified for Black Bear during genotyping analysis (X + Y peak=male, X peak=female)		
P2W87T-2	For initial gender used ZFY & ZFX to characterize X + Y of Items 1-3. Then used		
	Amelogenin to characterize X + Y chromosomes of bear.		
	PCR amplification + gel run for ZFY/ZFX + PCR amplification + Genotyping for		
	Amelogenin		
	For $\Delta F Y/ZFX$ one band=X=remain, two bands=X + Y=main		
K2P46U	For American one peak $-A$ -remains, 2 peaks $-A + 1$ -mate DCP amplification/analysis of the ZEV/ZEV control ration and SPV ration through		
K2K4011	canillary electrophoresis fragment analysis		
D3H13G-1	Amplification of the zinc finger protein of the X- chromosome and the testes determining		
Donnoo i	factor of the Y- chromosome (if present) (WTD)		
	Amplification of one X-linked locus (ZFX) and two Y-specific markers (SMCY and 318.2)		
	(if present) (black bear)		
D3H13G-2	Amplification of the zinc finger protein of the X- chromosome and the testes determining		
	factor of the Y- chromosome (if present) (WTD)		
	Amplification of one X-linked locus (ZFX) and two Y-specific markers (SMCY and 318.2)		
	(if present) (black bear)		
D3H13G-3	Amplification of the zinc finger protein of the X- chromosome and the testes determining		
	factor of the Y- chromosome (if present) (WTD)		
	Amplification of one X-linked locus (ZFX) and two Y-specific markers (SMCY and 318.2)		
	(if present) (black bear)		
C3F65S	Items 1 and 2: Amplification of the ZFX region on the X-chromosome, SMCY gene for a		
	male-specific MHC antigen, SMCY-infron 4: 318.2		
	them 5: Amphilication of the ZFX region on the X-chromosome, SRY region on the Y-		
M1S68R	PCR amplification and analysis of ZEX and ZEV using PAGE		
DAW11V 1	Poor Amologonin DCP amplification appillers electronhorosis using due labeled enimers		
B4W11V-1	Dear SPV DCR amplification, capillary electrophoresis using dye-labeled primers		
B4W11V-2	Deer - SRY, PCR amplification, capillary electrophoresis using dye-labeled primers		



B4W11V-1	For Bear: Bear Amelogenin		
B4W11V-3	For Deer: Deer SRY		
	Using PCR amplification, capillary electrophoresis with dye-labeled primers		
J2R15F-1	ZFX & SRY PCR-based gender typing		
J2R15F-2	PCR-based gender typing using ZFX & SRY genetic markers		
K1W95S-1	SRY - sex- determining region Y chromosome		
K1W95S-3	ZF - zinc finger (X chromosome control)		
V1W058 1	SPV sex determining ration V abromosome		
KIW955-1	The sex- determining region 1 chromosome		
K1W935-4	ZF - Zhić Hinger (A chromosome control)		
K1W95S-2	SRY - sex- determining region Y chromosome		
K1W95S-3	ZF - zinc finger (X chromosome control)		
K1W95S-2	SRY - sex- determining region Y chromosome		
K1W95S-4	ZF - zinc finger (X chromosome control)		
R4R65C-1	PCR amplification of the ZFX/ZFY and SRY genes		
R4R65C-2			
R4R65C-3			
C3F54C	PCR on the ZFX on the X-chromosome & SRY on the Y-chromosome		
B4C27D	SRY, ZFX/ZFY PCR Fragment analysis		
R9H57A	Amplification of the Amelogenin gene using PCR & visualization using agarose gel electrophoresis.		
	Primers used:KY1/KY2 - Yamauchi et al.2000, Journal of Veterinary Medical Sciences		
J3V67H	Gel electrophoresis, Cer SRY and Cer ZFXY primers		
R1J97A-1	NA		
R1J97A-2	NA		
R1J97A-3	NA		



III) Compilation of Individual Identification Results

Lab	Individual typing is not performed on the following species identified in this proficiency test	1) What could be the minimum number of animals represented in these 3 samples?	2) Which samples have the same genetic profile?
I3K48M-1	-	2	Item #1 and Item #2
I3K48M-2	-	2	Item 1 & Item 2
M3B22N	NA	NA	NA
J4L18F	Item 3	2	Item 1 and Item 2
B5H06W	NA	NA	NA
D6S24F	Black Bear	NA	NA
S2F23G	Black Bear	NA	NA
R2J94A-1	Odocoileus sp.	2	Item 1 and Item 2
R2J94A-2	Odocoileus sp.	2	Items 1 and 2
R2J94A-3	Odocoileus sp.	2	Item 1 and Item 2
B1V83W	NA	NA	NA
P2W87T-1	NA	2	Based on 13 microsatellite markers, Sample 1 and Sample 2 cannot be excluded as originating from the same animal
P2W87T-2	NA	2	Items 1 + 2 cannot be excluded as originating from the same individual based on the same genetic profile
K2R46H	Item 3 Odocoileus virginianus	2	Item 1 and Item 2
D3H13G-1	NA	2	Samples No. 1 and No.2
D3H13G-2	NA	2	Samples No. 1 and No.2
D3H13G-3	NA	2	Samples No. 1 and No.2
C3F65S	Odocoileus virginianus	2	Items 1 and 2
M1S68R	-	2	Item 1 and Item 2
B4W11V-1	-	2	Item 1 and Item 2 share the
B4W11V-2			same genetic profile
B4W11V-1	-	2	Item 1 and Item 2
B4W11V-3			
J2R15F-1	-	2	Item 1 & Item 2
J2R15F-2	-	2	Item 1 & Item 2
K1W95S-1	Sample (Item) 3 was not	Most likely 2 - one deer/one	Samples 1 and 2 have the
K1W958-3	individually typed. It was the only individual identified as deer, and individual typing was not	bear but can't say with certainty it is not 3 (2 bear, 1 deer)* *WDFW has no STR	same 6-locus STR profile



	necessary	baseline for American Black Bear, and therefore, we cannot calculate probability of identity – that is, we cannot calculate the probability of two black bear individuals sharing this 6- locus STR profile	
K1W95S-1 K1W95S-4	Sample (Item) 3 was not individually typed. It was the only individual identified as deer, and individual typing was not necessary	Most likely 2 – one deer/one bear but can't say with certainty it is not 3 (2 bear, 1 deer)* *WDFW has no STR baseline for American Black Bear, and therefore, we cannot calculate probability of identity – that is, we cannot calculate the probability of two black bear individuals sharing this 5- locus STR profile	Samples 1 and 2 have the same 5-locus STR profile
K1W95S-2	Item 3 identified as deer	2	Items 1 and 2 were both
K1W95S-3	(Odocoileus spp.)	2	identified as male black bear
			(Ursus americanus) and had identical STR genotypes
K1W95S-2 K1W95S-4	Item 3, identified as deer	2	Items 1 and 2 were both identified as male black bear (Ursus americanus) and had identical STR genotypes
R4R65C-1	Item 1, Item 2 and Item 3	NA	NA
R4R65C-2			
R4R65C-3			
C3F54C	-	2	Sample #1 & Sample #2
B4C27D	Ursus	NA	NA
R9H57A	NA	NA	NA
J3V67H	Odocoileus virginianus	2	1 and 2
R1J97A-1	NA	NA	NA
R1J97A-2	NA	NA	NA
R1J97A-3	NA	NA	NA



3 **Methods Used**

Lab	Methods/ Genetic Marker(s)
I3K48M-1	STR Analysis/ Ursus A-L
I3K48M-2	STR Analysis/ Ursid Loci A, B, D, H, L
M3B22N	NA
J4L18F	STR Analysis/ G10A, G10B, G10C, G1D, G10L, G10M, G10P, G10X, G10H, G10J
B5H06W	NA
D6S24F	NA
S2F23G	NA
R2J94A-1	STR Analysis/
	Bear Multiplex 1: G10X, G10J, UarMU59, G10C, G10M
	Bear Multiplex 2: CXX110, G1D-2, G10H, G1A, G10L
	Bear Multiplex 3: G10B, Bovine Amelogenin, G10J, G10P
R2J94A-2	STR Analysis/ G10X, G10J, UarMU59, G10C, G10M, CXX110, G1D, G10H, G1A, G10L,
	G10B, G10P
R2J94A-3	STR Analysis/ G10X, G10J, UarMU59, G10C, G10M, CXX110, G1D-2, G10H, G1A,
	G10L, G10B, Bov Amelo, G10P
B1V83W	NA
P2W87T-1	STR Analysis / G10B, G1D, G10H, G10L, MU05, G1A, G10C, G10U, G10X, MSUT-6,
	G10M, MU59, MU50 (Black Bear)
	Amelogenin for gender (Black Bear)
	MAP2C, BM1225, RT9, RT24, IGF, BM4208, FCB193, RT30 (WTD)
P2W87T-2	STR Analysis/ G10A, G10B, G10L, MU05, G10D, G10H, G10J, Amelogenin, G10X,
	G10M, G10U, G10C, MU59, MU50, G10P, MSUT6 (BB)
WAD 4611	MAP2C, BM1225, IGF, R19, R124, BM4268, FCB193, R15, R130 (W1D)
K2R46H	STR Analysis/ GIA, GI0B, GI0C, GID2, GI0H, GI0J, GI0L, GI0P, GI0X, CXXII0, and
Datilac 1	UarMU09
D3H13G-1	STR Analysis/ GIA, GI0B, GI0L, GI0C, GI0H, GI0P, GI0D, GI0M, UamD103, UamA2,
D21112C 2	UamD112 and UamD113
D3H13G-2	STR Analysis/ GIA, GI0B, GI0L, GI0C, GI0H, GI0P, GI0D, GI0M, UamD103, UamA2,
D21112C 2	STP Applying C1A, C10P, C10L, C10C, C10H, C10P, C10D, C10M, HamD102, HamA2
D3H13G-3	STR Analysis/ GIA, GI0B, GI0L, GI0C, GI0H, GI0P, GI0D, GI0W, UamD105, UamA2, UamD112 and UamD112
C2E658	STP Analysis/ C10P C10L C10C C10H HamD102 HamD112 HamD112
C3F035	STR Analysis/ G10B, G10E, G10C, G10H, Gamb105, Gamb112, Gamb115
M1S68R	STR Analysis/ G1A, G10B, G10C, G1D, G10L, G10M, G10P and G10X
B4W11V-1	STR Analysis/ G10B, G10C, G10H, G10I, G10L, G10O, G10P, G10X, G1A, G1D,
B4W11V-2	UarMU50, UarMU59
B4W11V-1	STR Analysis/ G10B, G10C, G10H, G10J, G10L, G10O, G10P, G10X, G1A, G1D,
B4W11V-3	UarMU50, UarMU59
J2R15F-1	STR Analysis/ CDFG Bear Panel: UamA2, UamA107, UamB1, UamB125, UamD103,
	UamD112, UamD116, UamD118



J2R15F-2	STR Analysis/ CDFG Bear Panel: UamA107, UamA2, UamB1, UamB125, UamD103, UamD112, UamD116, UamD118
K1W95S-1 K1W95S-3	STR Analysis/ G01A, G01D, G10B, G10C, G10L, G10X
K1W95S-1 K1W95S-4	STR Analysis/ G01D, G10B, G10C, G10L, G10X G01A is part of our standard panel, but we were unable to get it to amplify, so not included
K1W95S-2 K1W95S-3	STR Analysis/ WDFW bear STR microsatellite panel/ G01A, G01D, G10B, G10C, G10L, G10X
K1W95S-2 K1W95S-4	STR Analysis/ WDFW bear STR microsatellite panel/ G01A, G01D, G10B, G10C, G10L, G10X
R4R65C-1 R4R65C-2 R4R65C-3	NA
C3F54C	STR Analysis/ G10P, G10C, G10L, G10M, G10B, G1A, UamD103, UamD113, UamD116, UamD112, UamB135, Uam107
B4C27D	STR Analysis/ Whitetail – Cervid1, BM6506, INRA01, BM6438, BL25, RT5, RT7, RT13, BL42, S, P, D, Q, K, O, N, L, OARFCB193
R9H57A	NA
J3V67H	The two species found mean at least two individuals. However samples one and two, determined to be <i>Ursus americanus</i> could not be ruled as separate individuals.
R1J97A-1	NA
R1J97A-2	NA
R1J97A-3	NA



Response Summary Total Participants: 38

Confirmation	Item 1	Item 2	Item 3
Species Origin	38 (100%)	38 (100%)	38 (100%)
Gender Origin	33 (87%)	33 (87%)	29 (76%)
Individual Identification	25 (66%)		

Inconclusive	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	0 (0%)	0 (0%)	2 (5%)
Individual Identification	ı 0 (0%)		

N/A	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	4 (11%)	4 (11%)	7 (18%)
Individual Identification 13 (34%)		34%)	

Incomplete	Item 1	Item 2	Item 3
Species Origin	0 (0%)	0 (0%)	0 (0%)
Gender Origin	1 (3%)	1 (3%)	0 (0%)
Individual Identification 0 (0%)			

END OF REPORT

US Fish and Wildlife Service National Fish and Wildlife Forensics Laboratory 1490 East Main Street Ashland, Oregon 97520 541-482-4191 Test # 021914 16 | P a g e