ASSESSMENT FOR CERTIFICATION OF COMPETENCE IN FETAL MORPHOLOGICAL EXAMINATION

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

SOCIETY OF Biology

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

THIS FORM WAS UPDATED IN JANUARY 2013 – CHECK THAT YOU ARE USING THE CORRECT VERSION

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION

Name of Candidate: Amanda Phillips

Name of Applicant (Laboratory):	Amanda Phillips (Wil Research Company, Inc.)
Examination type assessed (species):	**BOUIN'S FLUID FIXED HEAD SECTION EXAMINATION, RAT**
Date of assessment:	
Names of assessors:	David K Schreur, Joyce Rendemonti

Specimens used for assessment:

1	2		

Key for abbreviations:

P – Needed prompting
PP – Needed frequent prompting
N – Nervous
VIP – Volunteered information previously
DK – Didn't know the answer
NC – Not consistent in technique

Assessor's Summary:

[delete or underline to highlight the appropriate description from the options below:]

Competent/competent and focussed / engaged and focussed during the assessment, and demonstrated / effectively communicated a sound knowledge / an impressive understanding / of all aspects

Had a very good understanding of the ~~at~~ structures well prepared.

Assessor signatures

Date 29-Aug 2015

LABORATORY LITTER ASSESSMENT – BOUIN'S FLUID
FIXED HEAD SECTION EXAMINATION

Name of Candidate: Amanda Phillips

COMMENTS FROM LABORATORY SPECIMEN EXAMINATION:

Talk through/procedure

Question	Acceptable Response	Response
Sectioning – how many sections, why?	Consistency with colleagues; enables examination of specific head regions	7 slices, SOP requires 7, make sure you see all of the structures - SOP Training
What is the importance of keeping the sections symmetrical?	Lateral symmetry or organs/brain areas; able to identify anomalies easier Yes - so that it is consistent.	
How do you achieve this?	stamping consistent with your slices	
What would you do if a section wasn't symmetrical?	Recut/resection Is small if you think something or misaligned you have to dig if you can't see a structure.	
Describe to me what you are doing	Looking at both sides of section Comparing and checking laterality of paired structures Re-sectioning Looking at size shape form	- Missed the eye so I am re-sectioning.
What might you see in that Brain section? [Describe section]	lateral Ventricals, Basio occipital, Optic Chiasm, Choroid plexis, superior sagittal sinus remove skin to examine for holes in the skull	cerebral hemisphere
What might you see in that Nasal section? [Describe section]	Nasal septum, middle straight connected to hard palate, Nasal cavities open unobstructed, symmetrical hair follicles nasal conchae	
What might you see in that eye section? [Describe section]	retina, lens, cornea, Uterous chamber, Olfactory Bulbs, nasal pharynx, upper and lower molars	
Note when candidate is recording observations – as they are found or at the end of the examination	enter it as soon as we find it.	
Confirm that sections are being manipulated appropriately.	carefully turning slices with small forceps, sides	looking at both

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Consistency in procedural routines

Question	Acceptable Response	Response
Can you think what the importance of consistency in magnification across examiners might be?	Consistency is important so that all examiners see and record to the same level of detail.	Don't want to miss anything, Don't want to
Do you always use the same sequence and routine for examination? Why do you think that it is important?	Yes – don't miss anything, important for pattern recognition, subconscious alert.	for consistency.
Do you think it is necessary to look at structures from more than one aspect?	Yes – build up picture of structures by following them through the sections, ensuring correct size, shape and form. Important to look at both sides of sections	
Which structures would you examine in situ before you go on to disturb the tissues?	Lenses before clearing humour to check retina, palate before sectioning, ~~cerebellum~~	look at head externally before sitting look at skin before peeling it.

Terminology and recognition levels used

Question	Acceptable Response	Response
How do you decide to record observations? What could you do to make sure that you've chosen the most accurate term?	User guides and recognition levels Discuss with colleagues, reference material, user guides and recognition levels	any thing abnormal lots of experience and training. If not sure you can ask a colleague. Training materials has a list of calls. Refer to Macris paper ask a supervisor.
Would you assign a severity level, why?	User guides and recognition levels	No, we don't call severities
How do you ensure other examiners are using the same terms as you for the same observation? And for severities?	Recognition levels/peer review/consistency check. Mention that examiner records are traceable back to original examiner. Discuss/review findings	Training - go through alot of training to be sure everyone is using the same terms - we have photos to refer to

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Terminology and recognition levels used

Question	Acceptable Response	Response
	with colleagues, refer to recognition levels/user manuals/training /reference material/background data	

Recognition of artefacts

Question	Acceptable Response	Response
How would you decide if real or artefact?	Does the condition of adjacent sections support your decision?	go through the rest of the slides. -A hole in the palate I would examine the edges
	Reconstruct the sections, check forwards and backwards through the sections, both sides of each section	
What procedural errors are likely to lead to artefacts?	Are the margins of the structure smooth or jagged?	mechanical errors fixative issues
	Has the specimen not been placed in sufficient fixative, resulting in poor decalcification?	forceps could damage the palate
	Has the fixation caused any shrinkage or swelling?	
	Is the structure an unusual colour?	
	Background knowledge/experience	
	Refer to necropsy observations, correct handling of specimens	may cause haemorrhage if handled roughly
Can you think of any observations which could be caused by an artefact?	Cystic dilatation, haemorrhage, absent pinna, forceps damage to palate, blood in cochlea, head damaged when cut off from body	
Would you record artefacts?		yes

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Recognition of artefacts

Question	Acceptable Response	Response
How would you record an artefact?	Explain how	record on the artefact sheets not in the study records

Correct identification of anomalies

Question	Acceptable Response	Response
What could you do to make sure that you've chosen the most accurate term?	Discuss/review findings with colleagues; refer to recognition levels/user manuals/training material/background data.	VIP
Why have you used that term? (any observation with a recognition level, relative to the norm)	Give reason based on degree of displacement, normal variation. Based on symmetry; alignment; position in relation to other structures, normal variation	Training program
How would you decide if you thought one eye was displaced?	Give reason based on degree of displacement, normal variation, alignment; position in relation to other structures, normal variation; compare to normal specimen	reconstruction of slides restain if needed. look at structures around it.
What would you do if you thought the pituitary gland was missing?	Recut/resection	if necessary may have to pick up the brain to see it.
What anomalies might you see in the eye/state region?.		open eye - external lens - large or small retinal folds
What anomalies might you see in the brain/ state region?		hydrocephaly dilation of ventricles problems with pituitary defect in the skull possible meningocele
What anomalies might you see in the Nasal/state region?		Septum not attached to palate missshapen, nasal conchea absent

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Correct identification of anomalies

Question	Acceptable Response	Response

Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:	Acceptable Response	Response
Single naris	Single incisor socket, displaced orbital sockets, form of oral cavity	might only be 1 nasal passage. might be a single nasal cavity ~~cleft palate~~
Flat eye bulge	Check for presence/size of eye	
Domed head	Dilated ventricles (lateral, 3rd and 4th) Check for artefact and size of fetus	hydrocephaly dilatation of lateral or 3rd ventricles
Short lower jaw	Large/small/protruding tongue, absent incisors, form of oral cavity	
Skin lesion/haemorrhage cranium	Meningocoele (skin covered), 4th ventricle dilation.	
What would you expect to record in association with low fetal weight?	Thin, translucent, fragile skin, oedema over snout, domed cranium, apparent change in size of eye bulge, non-eruption of incisors, "perimeningal cavitation", dilation of ventricles, change in shape of lens, separation of subcutaneous layers, very clear fixation [Check day of PM if whole litter affected]	hydrocephaly expect things to be under developed structures may be small

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Demonstration of knowledge of consequence of findings (choose minimum of 3 from this section)

What else might you see with:	Acceptable Response	Response

Awareness of importance of communication lines as reaction to unusual findings

Question	Acceptable Response	Response
What would you do if you had never seen a finding before? What would you do if you were unsure how to describe an observation?	Describe what is seen, discuss/review findings with colleagues, refer to recognition levels/user manuals/training /reference material/background data	go to my supervisor go to Macers Training manuals.

Additional comments

THE INTERNATIONAL REGISTER OF FETAL MORPHOLOGISTS

RAT BOUINS FLUID FIXED HEAD SECTION IMAGES FOR CERTIFICATION

Amanda Phillips

Name of Applicant (Laboratory):	Amanda Phillips (Wil Research Company, Inc.)

Examination type assessed (species): **BOUINS FLUID FIXED HEAD SECTIONS, RAT**

Date of assessment: 27 Aug 2015

Specimens used for assessment:

1	2	3	5		

Key for abbreviations:

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Assessor signature

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Amanda Phillips

Image 1	Questions	Answers given

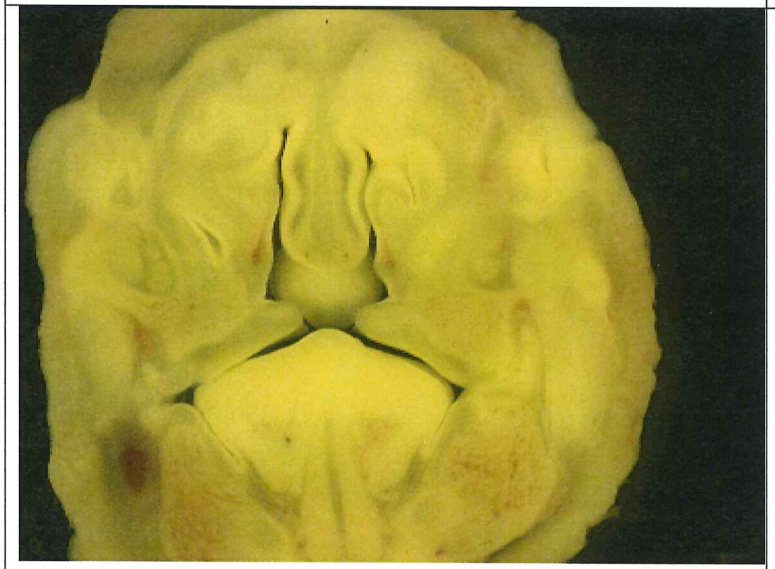	**What is the observation?**
	• (Secondary) palate cleft
	
	What else might you want to say?
	• Nasal area looks subcutaneous oedematous, is the fetus very small?
	• Was tongue protruding at external?
	
	How would you make sure you were recording the correct finding?
	• Check previous and subsequent sections for evidence of same observation
	• Check for evidence of damage at external examination (obviously not case here)
	• Resection if necessary
	
	What else might be associated with this?
	• Check eyes are formed OK
	• check nasal cavities/conchae formation
	
	• Any other points?
	  • Are cleft palates always this easy to see?
	  • What other defects are often associated with cleft palate?
		Nasal passage looks a little small
		
		Want to look at subsequent slides to check the nasal passages
		
		would look at lung from previous slide
		
		size and shape of the tongue
		
		not neccassarily you can tell that is not an artefact

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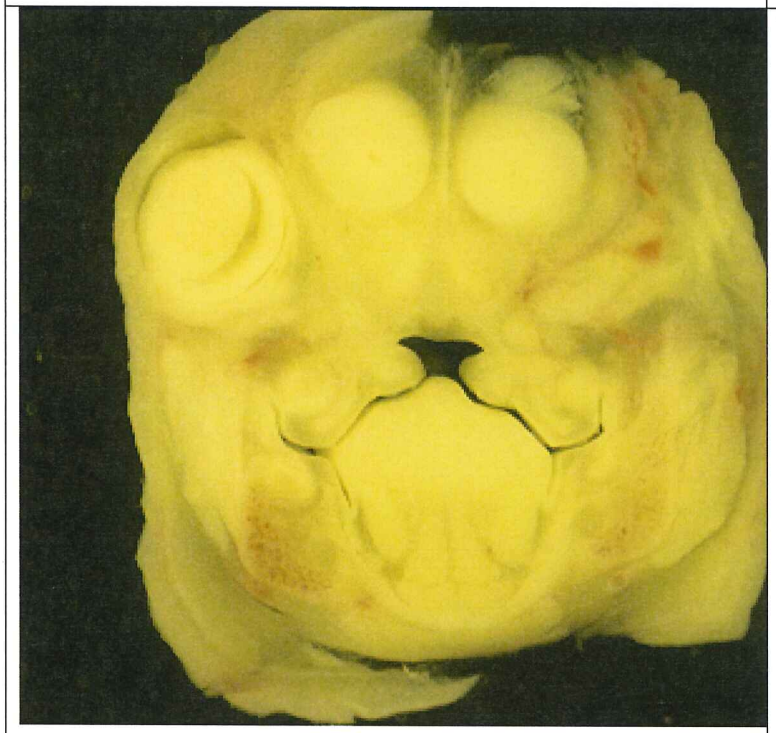
Image 2	Questions	Answers given
	**What is the observation?** • Unilateral anophthalmia (right side?) • (secondary) palate cleft **What else might you want to say?** • Artefactual damage to (right?) side of skull, above olfactory bulbs and neck region. • Was tongue protruding at external examination **How would you make sure you were recording the correct finding?** • Piece back together to check laterality • Check laterality against other sections • Check for symmetry of sections (eye is not in another section) • Check for real misalignment of eyes • Check previous and subsequent sections for evidence of same observation (palate) • Check for evidence of damage at external examination (obviously not case here) • Check external for eye bulge observation/eyelid fusion or slit	thin site, part of skull missing, need to look at other slides look at olfactory bulbs look like a thin site don't see any signs of a retina or lens

	What else might be associated with this? • check nasal cavities/conchae formation • Are cleft palates always this easy to see? • What other defects are often associated with cleft palate?	cleft lip. cleft jaw VP. septum absent nasal passages small

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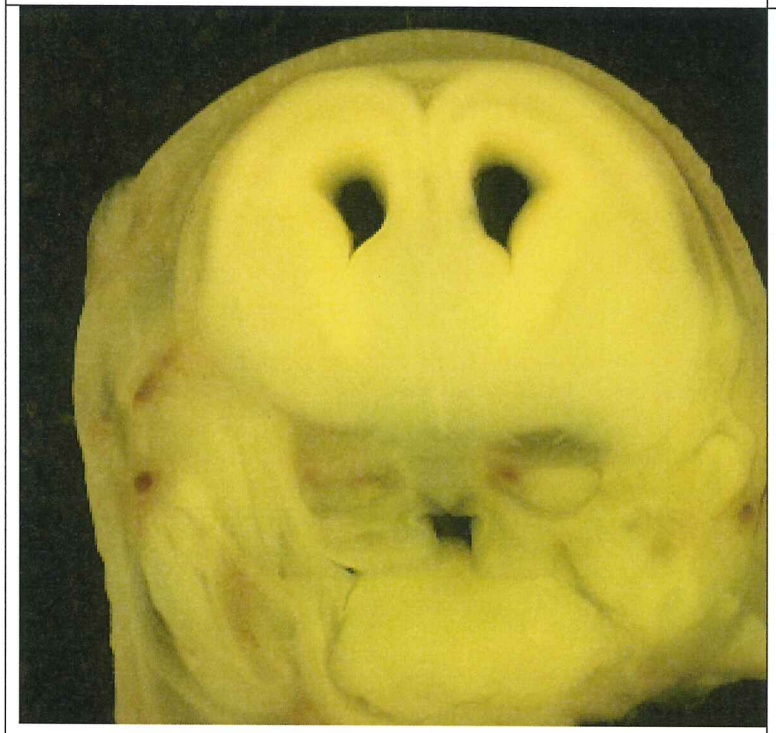
Image 3	Questions	Answers given
	**What is the observation?** • Cerebral hemispheres lateral ventricle dilatation ~~(bilateral)~~ • Soft palate cleft **What else might you want to say?** • Severity • Were olfactory bulbs affected (is fetus very small?) **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • Dilatation of 3rd/~~4th ventricle~~, • Low fetal weight	look at slides to determine if that is part of the palate look at slides before and after. - would at a control foetus. look at 3rd ventricle see if a domed head was called at external.

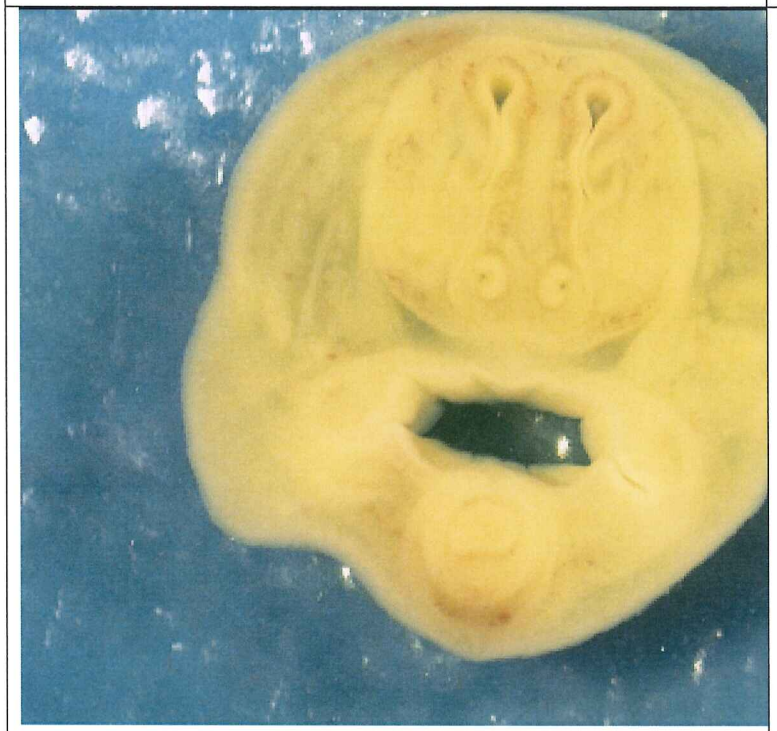
Image 4	Questions	Answers given
	**What is the observation?** • Single incisor, lower jaw/mandible • Incisors fused, lower jaw/mandible • Single incisor socket/fused incisor sockets **What else might you want to say?** • Describe location of single tooth • Describe size of tooth (is it size of 2 teeth or 1?) • Is mandible also fused **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Pointed lower jaw at external examination • Short lower jaw at external examination • Mandible fusion at mandibular symphysis	

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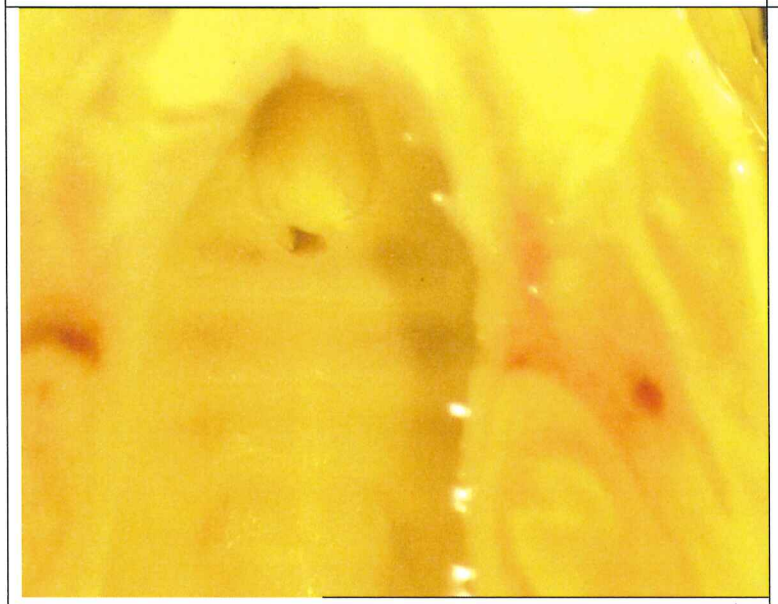
Image 5	Questions	Answers given
	**What is the observation?** • Something going on with junction between primary palate/incisive foramen and anterior palate foramen secondary palate shelves **What else might you want to say?** • Words for level of removal of lower jaw, cut through mouth not straight • Check for forceps damage from external examination of palate **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Possible effect on nasal septum	possible artefact Check the nasal septum nasal passages If nasal passages were involved possibly trps or involved

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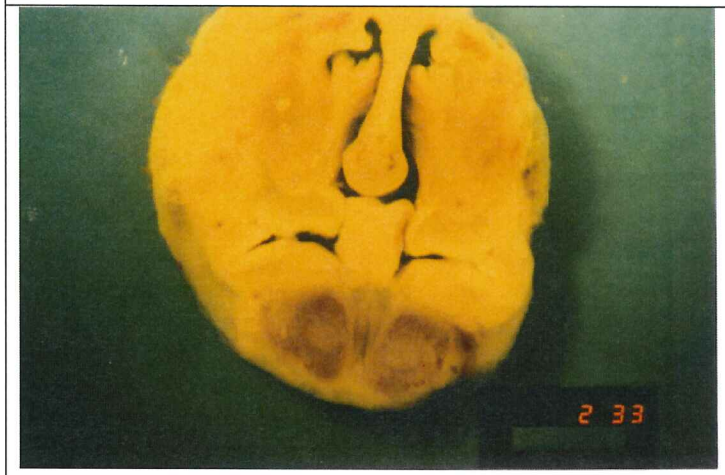	**What is the observation?** • (Secondary) palate cleft **What else might you want to say?** • Was tongue protruding at external? • Nasal septum looks misshapen, bulbous • Discolouration around lower jaw teeth **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • check nasal cavities/conchae formation	

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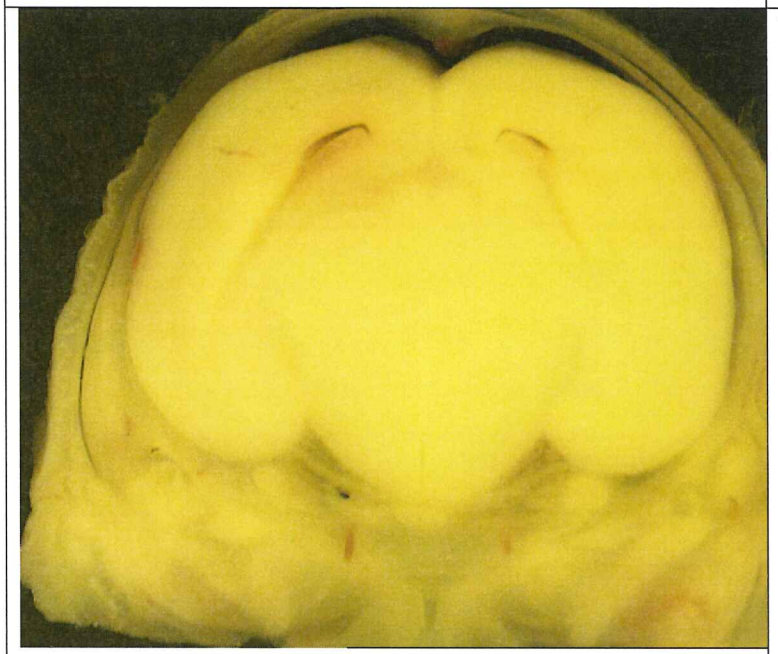	**What is the observation?** • Small pituitary **What else might you want to say?** • Severity • No apparent distinction between anterior and posterior portions of pituitary • Damage to left side of head externally **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check other sections for displacement of pituitary • Check for symmetry of sections • Resection to clarify **What else might be associated with this?**	

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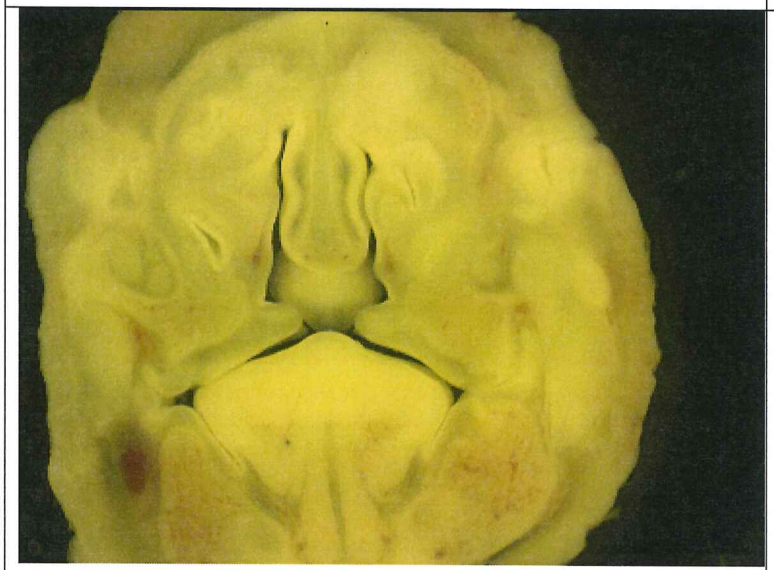	**What is the observation?**
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	What else might be associated with this?
	• Check eyes are formed OK
	• check nasal cavities/conchae formation
	
	• Any other points?
	  • Are cleft palates always this easy to see?
	  • What other defects are often associated with cleft palate?
		SEPTUM NOT ATTACHED TO HARD PALATE
		NASAL PASSAGES AREA SMALL
		
		SIZE + SHAPE OF TONGUE SHOULD BE CHECKED
		
		DOESN'T SEEM TO BE AN ARTIFACT

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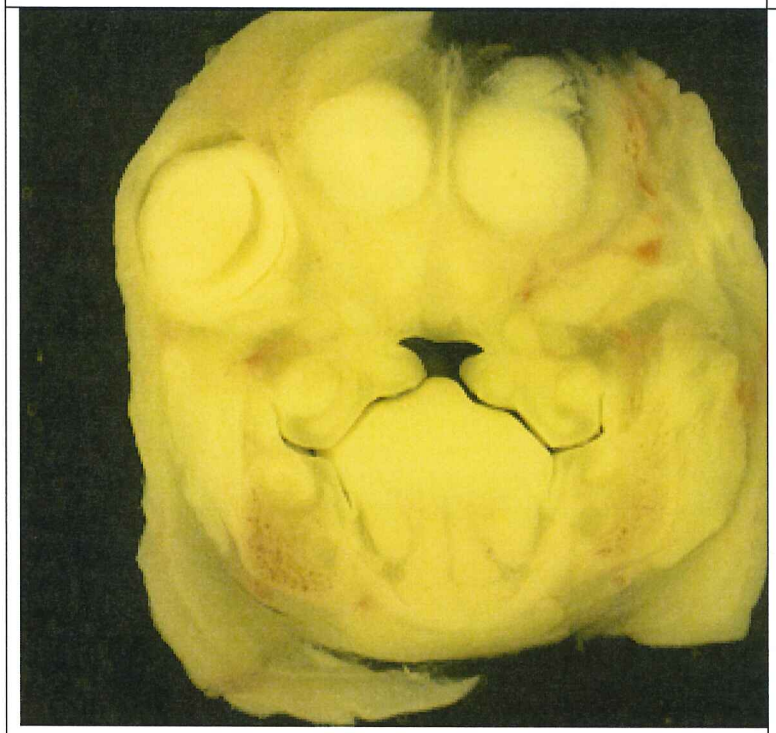	**What is the observation?** • Unilateral anophthalmia (right side?) • (secondary) palate cleft **What else might you want to say?** • Artefactual damage to (right?) side of skull, above olfactory bulbs and neck region. • Was tongue protruding at external examination **How would you make sure you were recording the correct finding?** • Piece back together to check laterality • Check laterality against other sections • Check for symmetry of sections (eye is not in another section) • Check for real misalignment of eyes • Check previous and subsequent sections for evidence of same observation (palate) • Check for evidence of damage at external examination (obviously not case here) • Check external for eye bulge observation/eyelid fusion or slit	— THIN SLICE CHECK SIZE AND SHAPE OF TONGUE

	What else might be associated with this?
	• check nasal cavities/conchae formation
	  • Are cleft palates always this easy to see?
	  • What other defects are often associated with cleft palate?
		CLEFT LIP OR JAW?
		ABSENT SEPTUM?

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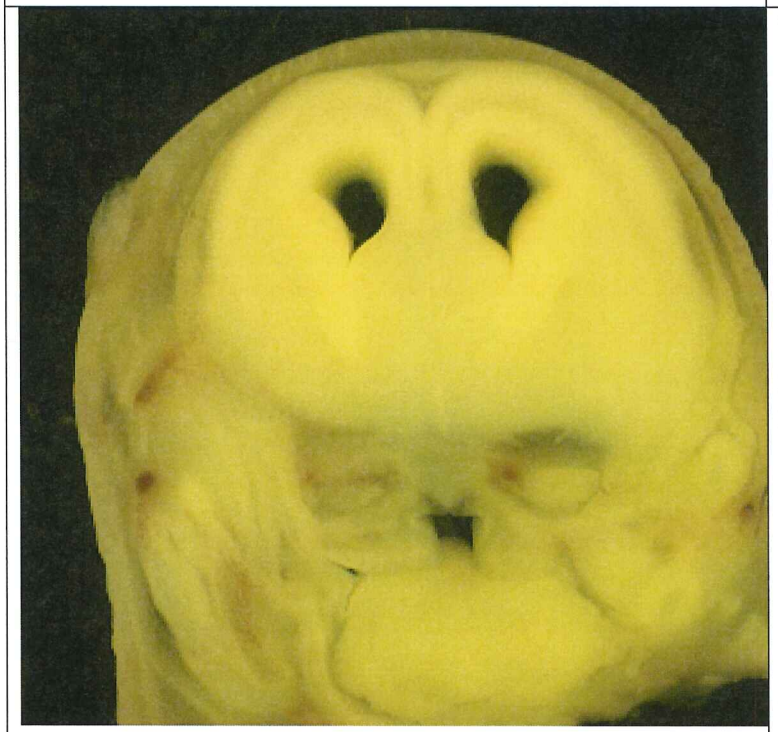	**What is the observation?** • Cerebral hemispheres lateral ventricle dilatation (bilateral) • Soft palate cleft could be cleft palate would check other slices. **What else might you want to say?** • Severity • Were olfactory bulbs affected (is fetus very small?) **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • Dilatation of 3rd/4th ventricle • Low fetal weight	Hydrocephaly Rt. trigeminal hard to see Did it have domed head?

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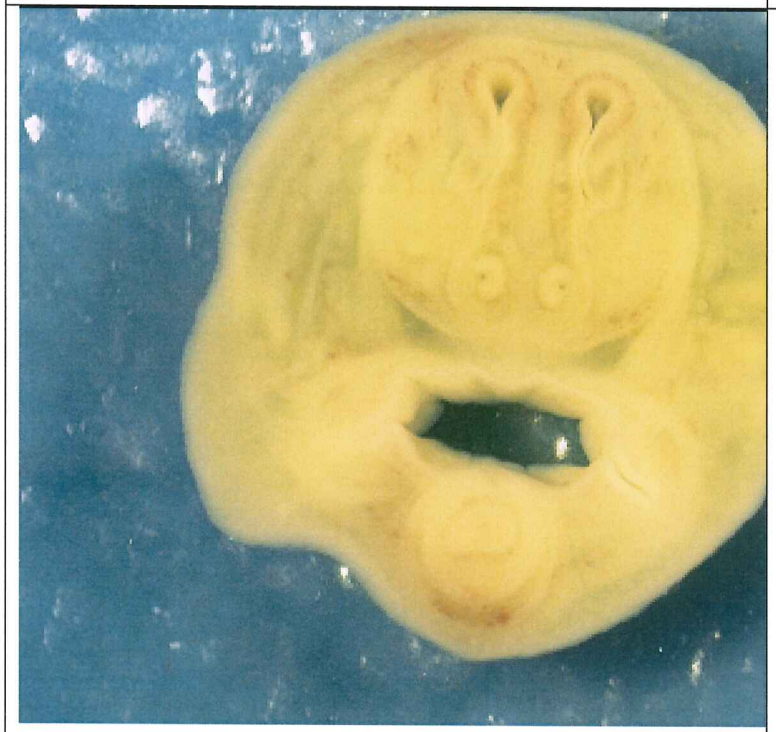	**What is the observation?** • Single incisor, lower jaw/mandible • Incisors fused, lower jaw/mandible • Single incisor socket/fused incisor sockets **What else might you want to say?** • Describe location of single tooth • Describe size of tooth (is it size of 2 teeth or 1?) • Is mandible also fused **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Pointed lower jaw at external examination • Short lower jaw at external examination • Mandible fusion at mandibular symphysis	

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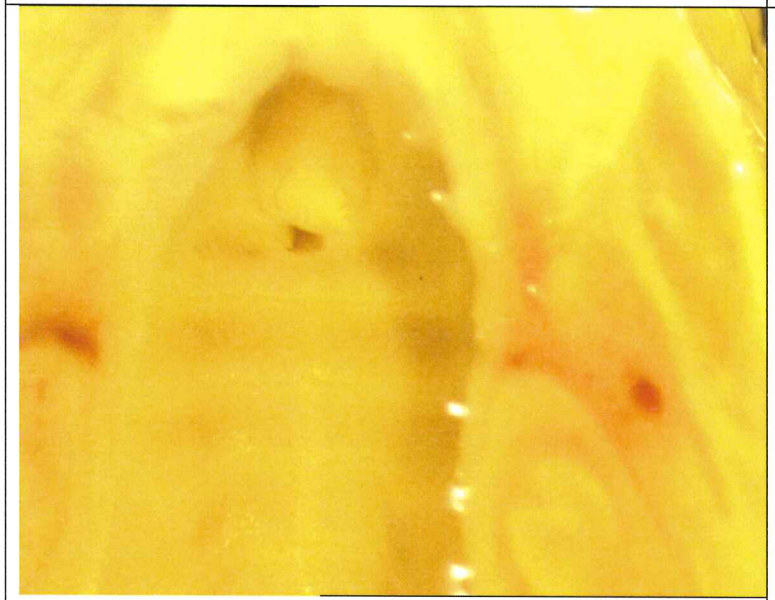	**What is the observation?** • Something going on with junction between primary palate/incisive foramen and anterior palate foramen secondary palate shelves **What else might you want to say?** • Words for level of removal of lower jaw, cut through mouth not straight • Check for forceps damage from external examination of palate **How would you make sure you were recording the correct finding?** **What else might be associated with this?** • Possible effect on nasal septum	- LOOKS LIKE A HOLE, POSSIBLY A CLEFT CHECK NASAL PASSAGES AND CONCHAE

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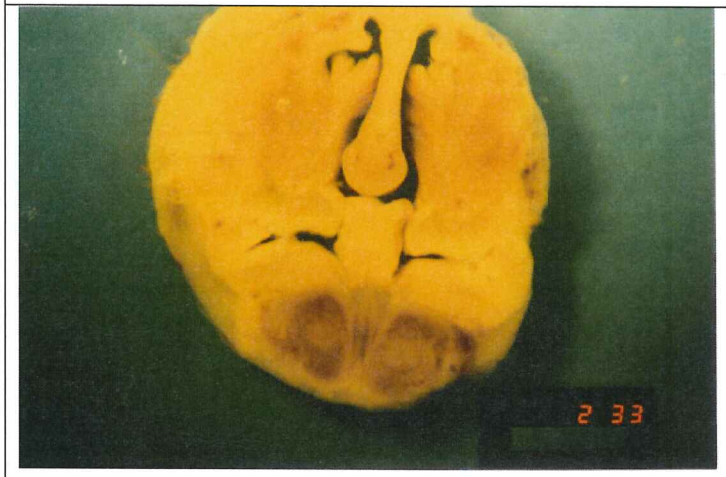	**What is the observation?** • (Secondary) palate cleft **What else might you want to say?** • Was tongue protruding at external? • Nasal septum looks misshapen, bulbous • Discolouration around lower jaw teeth **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check for evidence of damage at external examination (obviously not case here) **What else might be associated with this?** • check nasal cavities/conchae formation	

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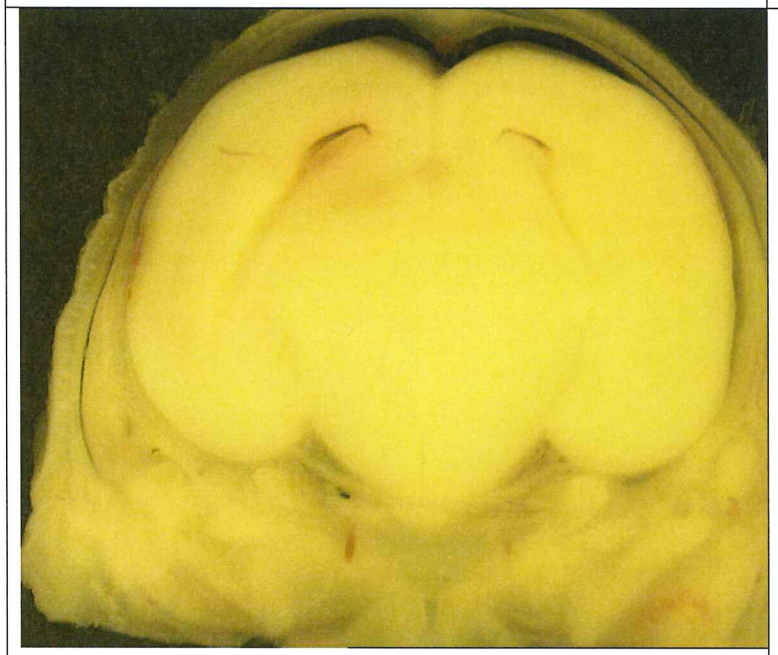	**What is the observation?** • Small pituitary **What else might you want to say?** • Severity • No apparent distinction between anterior and posterior portions of pituitary • Damage to left side of head externally **How would you make sure you were recording the correct finding?** • Check previous and subsequent sections for evidence of same observation • Check other sections for displacement of pituitary • Check for symmetry of sections • Resection to clarify **What else might be associated with this?**	