



Evaluation Report

Intragenomic Conflict Working Group

April 20-22, 2009

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Executive Summary

Brief Synopsis of Event

This report is an evaluation of a NIMBioS Working Group entitled “Intragenomic Conflict,” which held its first meeting at NIMBioS April 20-22, 2009. NIMBioS Working Groups are chosen to focus on major scientific questions at the interface between biology and mathematics. NIMBioS is particularly interested in questions that integrate diverse fields, require synthesis at multiple scales, and/or make use of or require development of new mathematical/computational approaches. NIMBioS Working Groups are relatively small (10-15 participants), focus on a well-defined topic, and have well-defined goals and metrics of success. Working Groups will typically meet 2-3 times over a two-year period, with each meeting lasting 3-5 days; however, the number of participants, number of meetings, and duration of each meeting is flexible, depending on the needs and goals of the group.

The Intragenomic Conflict group comprised 14 participants, including co-organizers Francisco Ubeda de Torres (NIMBioS), Jon Wilkins (Santa Fe Institute), and Andy Gardner (University of Edinburgh) (See Appendix A for a full listing of participants). NIMBioS Associate Director Sergey Gavrilets also participated in the meeting and is included in the total participant count of 14. All participants were college/university faculty involved in genetics or evolutionary research (See Appendix C for a detailed listing).

The main goal of the Intragenomic Conflict Working Group was to bring together biologists working on intragenomic conflict and mathematicians interested in evolutionary theory to work toward developing new methods and modeling techniques for understanding intragenomic conflict. The focal questions to be answered by the Working Group were:

- What do conflicting genes have in common? What makes them different?
- What is the difference between competing and conflicting genes?
- What do models of imprinted genes have in common? What makes them different?
- Is one type of modeling better than other for modeling intragenomic conflict?
- What is the equivalence between different types of models?
- What aspects of intragenomic conflict require new types of models?
- What are the possible outcomes of intragenomic conflict?
- When can we say that conflict has been resolved?

Evaluation Design

An electronic survey aligned to the following evaluation questions was designed by the Evaluation Coordinator with input from the NIMBioS Director and Deputy Director:

1. Were participants satisfied with the Working Group overall?
2. Did the meeting meet participant expectations?
3. Do participants feel the Working Group made adequate progress toward its stated goals?
4. Do participants feel they gained knowledge about the main issues related to the research problem?
5. Do participants feel they gained a better understanding of the research across disciplines related to the Working Group's research problem?
6. What impact do participants feel the Working Group will have on their future research?
7. Were participants satisfied with the accommodations offered by NIMBioS?
8. What changes in accommodations, group format, and/or content would participants like to see at future meetings?

The final instrument was hosted online via UT's secure online survey host mrInterview. Links to the survey were sent to the 12 Working Group participants (NIMBioS employees Sergey Gavrilets and Francisco Ubeda de Torres were not expected to participate in the evaluation) on April 27, 2009. Reminder emails were sent to non-responding participants on May 4 and May 8, 2009. By May 15, 2009, nine participants had given their feedback, for a response rate of 75%.

Highlights of Results

- Overall satisfaction with the Working Group was high among respondents, the majority of whom indicated they either agreed or strongly agreed that the Working Group was productive (89%;n=9) and met their expectations (88%;n=8).
- 100% of respondents indicated they either agreed or strongly agreed that they would recommend participating in NIMBioS Working Groups to their colleagues.
- Overall, respondents reported being very satisfied with the travel, housing, and other amenities provided by NIMBioS during the Working Group.
- Respondents reported variable levels of learning as a result of participating in the Working Group, with 55%-100% either agreeing or strongly agreeing that they have a better understanding of the different issues related to the group's research problem.
- 100% of participants indicated having a better understanding of the modeling techniques available for research on intragenomic conflict as a result of attending the Working Group.
- 75% of participants said gaining an understanding of the research occurring in other disciplines was the most useful aspect of the Working Group.
- All respondents agreed that the format of the Working Group was very effective for achieving its goals, and that the Working Group made adequate progress toward its primary goal for the first meeting: finding a common language across disciplines for intragenomic conflict research.
- 78% of respondents indicated they felt that the exchange of ideas that took place during the Working Group would initiate or influence their future research.
- Two respondents reported they had developed solid plans for collaborative research with other Working Group participants, while others indicated they were in the process of developing collaborative research plans.

Conclusions and Recommendations

Overall, the Working Group was very successful in accomplishing its goals. Working Group participants were satisfied with the meeting, indicating that it was a productive experience that met their expectations. Participants were also highly satisfied with the travel, housing, and other amenities offered by NIMBioS. Participants indicated gaining varying degrees of understanding about the issues surrounding the research problem of the Working Group, but all indicated they had a better understanding of the research data available on intragenomic conflict as a result of attending the meeting. Participants felt that adequate progress was made toward the goal of finding a common language across disciplines in intragenomic conflict research, but that it would take several more meetings before the goals could be fully realized.

Several participants indicated they planned to take the knowledge they gained during the Working Group and apply it to their own research. Two participants also reported they had developed solid plans for collaborative research with other Working Group participants, while others indicated they were in the process of developing collaborative research plans.

While most participants could not think of ways to improve future meetings, several suggestions were offered, including better clarification and communication of the group's goals and scheduling all presentations before group discussions so that all perspectives could be considered during the discussions. Other suggestions included better coffee, more access to power outlets in the meeting rooms, and reducing waste by providing reusable coffee mugs to all participants.

Based on analysis of participant response data, the recommendations are as follows:

- Continue with the current format of the Working Group, but consider ways to more clearly articulate the Working Group's goals to all participants before and during the meeting to ensure everyone is clear on the direction in which the group is heading and how individual participants can contribute to it.
- Consider buying reusable coffee mugs for participants to reduce waste

Intragenomic Conflict Working Group Evaluation Report

Background

Introduction

A Working Group entitled “Intragenomic Conflict” met at NIMBioS April 20-22, 2009. The group comprised 14 participants, including co-organizers Francisco Ubeda de Torres (NIMBioS), Jon Wilkins (Santa Fe Institute), and Andy Gardner (University of Edinburgh). NIMBioS Associate Director Sergey Gavrilets also participated in the meeting and is included in the total participant count of 14 (See Appendix A for a full listing of participants).

NIMBioS Working Groups are chosen to focus on major scientific questions at the interface between biology and mathematics. NIMBioS is particularly interested in questions that integrate diverse fields, require synthesis at multiple scales, and/or make use of or require development of new mathematical/computational approaches. NIMBioS Working Groups are relatively small (10-15 participants), focus on a well-defined topic, and have well-defined goals and metrics of success. Working Groups will typically meet 2-3 times over a two-year period, with each meeting lasting 3-5 days; however, the number of participants, number of meetings, and duration of each meeting is flexible, depending on the needs and goals of the group.

The main goal of the Intragenomic Conflict Working Group was to bring together biologists working on intragenomic conflict and mathematicians interested in evolutionary theory to work toward developing new methods and modeling techniques for understanding intragenomic conflict. The focal questions to be answered by the Working Group were:

- What do conflicting genes have in common? What makes them different?
- What is the difference between competing and conflicting genes?
- What do models of imprinted genes have in common? What makes them different?
- Is one type of modeling better than other for modeling intragenomic conflict?
- What is the equivalence between different types of models?
- What aspects of intragenomic conflict require new types of models?
- What are the possible outcomes of intragenomic conflict?
- When can we say that conflict has been resolved?

Working Group Background

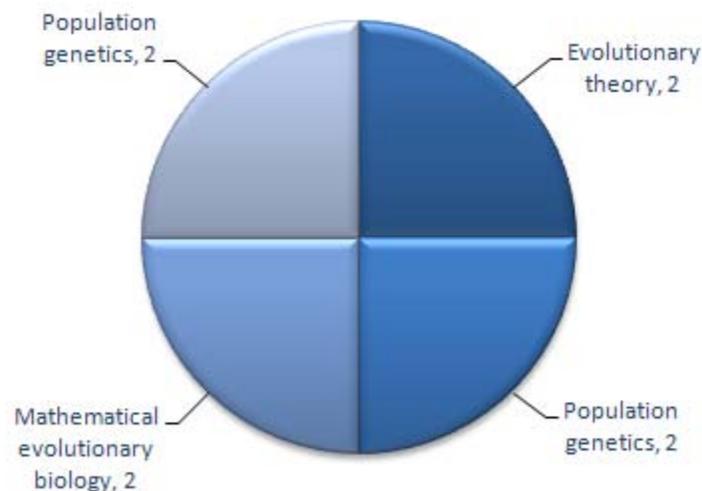
Two genes clash when the spread of one allele favors the spread of another allele with the opposite effect. There are two ways in which one gene can create the context for the spread of a second gene. The first is biasing transmission at a cost to the rest of the genome; the second is diverting resources to itself or related individuals. Attempts to bias transmission account for meiotic drive and gene conversion, while attempts to divert resources account for genomic imprinting and green bear effects, among others. The more interesting and realistic questions related to the evolution of Mendelian segregation, sex chromosomes, recombination and gene expression are limited by the mathematical complexity of the corresponding models.

Participant Demographics

An electronic survey, which included optional demographic questions, was sent to 12 participants (the two NIMBioS employees, Sergey Gavrilets and Francisco Ubeda de Torres were not expected to participate in the evaluation) to gather information about their perception of the working group. Of the seven males and two females responding to these questions, seven self-identified as white, and two as Asian. None of the respondents indicated being of Hispanic/Latino ethnicity.

All respondents were college/university faculty, seven of whom were involved in both teaching and research, while two were involved in research only. Seven respondents indicated coming from four-year universities, none of which were classified as minority serving or women's only institutions. Respondents were involved in several areas of research (See Appendix C for a detailed listing), all of which dealt in some way with genetics or evolutionary research (Figure 1).

Figure 1. Survey respondents' self-described main area of business/education/research



One of the respondents indicated his/her work was sponsored by a National Science Foundation (NSF) grant (Table1).

Table 1. *NSF grants supporting participant research*

| Name of grant | Institution at which grant is held |
|---|------------------------------------|
| Integrative Studies of Wolbachia-Eukaryotic Interactions: Genomes to Communities and Back | University of Rochester |

Evaluation Design

Evaluation Questions

The evaluation of the Working Group was both formative and summative in nature, in that the data collected from participants was intended to both gain feedback from participants about the quality of the current Working Group and also to inform future meetings. The evaluation framework was guided by Kirkpatrick's Four Levels of Evaluation model for training and learning programs (Kirkpatrick, 1994¹). The evaluation questions were developed according to level one of the model, participants' reactions, in order to gather information about how participants felt about the content and format of the Working Group, as well as the accommodations provided by NIMBioS. Several questions constituted the foundation for the evaluation:

1. Were participants satisfied with the Working Group overall?
2. Did the meeting meet participant expectations?
3. Do participants feel the Working Group made adequate progress toward its stated goals?
4. Do participants feel they gained knowledge about the main issues related to the research problem?
5. Do participants feel they gained a better understanding of the research across disciplines related to the Working Group's research problem?
6. What impact do participants feel the Working Group will have on their future research?
7. Were participants satisfied with the accommodations offered by NIMBioS?
8. What changes in accommodations, group format, and/or content would participants like to see at future meetings?

Evaluation Procedures

An electronic survey aligned to the evaluation questions was designed by the Evaluation Coordinator with input from the NIMBioS Director and Deputy Director. The final instrument was hosted online via UT's secure online survey host mrlInterview. Links to the survey were sent to the 12 Working Group participants (the two NIMBioS employees, Sergey Gavrilets and Francisco Ubeda de Torres were not

¹ From Kirkpatrick, D.L. (1994). *Evaluating Training Programs: The Four Levels*. San Francisco, CA: Berrett-Koehler.

expected to participate in the evaluation) on April 27, 2009. Reminder emails were sent to non-responding participants on May 4 and May 8, 2009. By May 15, 2009, nine participants had given their feedback, for a response rate of 75%.

Data Analysis

Data from the electronic survey included both forced-response and supply-item questions. All data were downloaded from the online survey host into the statistical software package SPSS for analysis. Quantitative data were analyzed using SPSS, while qualitative data were analyzed in SPSS Text Analysis for Surveys. Qualitative responses were categorized by question and analyzed for trends.

Findings

Participant Satisfaction

Overall Satisfaction

Overall satisfaction with the Working Group was high among respondents, the majority of whom indicated they either agreed or strongly agreed that the Working Group was productive (89%) and met their expectations (88%). Some general participant comments:

“The facilities were great and everyone was very friendly. Everything was extremely well organized and I really appreciated that I could not worry about details and just think about science.”

“All was well, including the nice trip to the Smokies...”

All respondents thought the presentations were useful as well and that the presenters were very knowledgeable about their presentation topics. Additionally, 100% of respondents indicated they either agreed or strongly agreed that they would recommend participating in NIMBioS Working Groups to their colleagues (Table 2).

Table 2. Participant satisfaction with various aspects of the Working Group, by level of agreement

| | <i>n</i> | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|----------|----------------|-------|---------|----------|-------------------|
| I feel the Working Group was very productive. | 9 | 22%* | 67% | 11% | 0% | 0% |
| The Working Group met my expectations. | 8 | 63% | 25% | 13% | 0% | 0% |
| The presenters were very knowledgeable about their topics. | 9 | 78% | 11% | 11% | 0% | 0% |
| The presentations were useful. | 9 | 44% | 56% | 0% | 0% | 0% |
| I would recommend participating in NIMBioS Working Groups to my colleagues. | 9 | 89% | 11% | 0% | 0% | 0% |

* Note: Percentages in tables may not add to 100% due to rounding

Satisfaction with Accommodations

Overall, respondents reported being very satisfied with the travel, housing, and facilities provided by NIMBioS during the Working Group. One participant said about the overall accommodations:

“The facilities were great and everyone was very friendly. Everything was extremely well organized and I really appreciated that I could not worry about details and just think about science.”

NIMBioS arranged housing for all nine respondents, all of whom reported being either satisfied or very satisfied with their accommodations, although one respondent indicated having trouble with the “spotty, intermittent, and slow” internet service.

Additionally, six of the seven participants for whom NIMBioS arranged transportation all indicated high satisfaction levels with their travel arrangements:

“...I really liked the fact that I did not have to make the arrangements myself. Thanks! “

The one participant who reported being dissatisfied with his/her travel arrangements said he/she had to deal with cancelled flights both coming to and leaving Knoxville:

“I had cancelled flights and long delays both coming to and leaving Knoxville. Apparently the flights had been cancelled by Northwest and the cancellation communicated to the Knoxville travel agency but I failed to get the message. this could have been because

(1) A message was not forwarded to me

(2) an e-mail was sent but it got lost and unread in the flood of e-mail I receive”

The majority of participants also reported high levels of satisfaction with the comfort and resources of the NIMBioS facility, as well as the quality of meals provided (Table 3).

Table 3. *Participant levels of satisfaction with Working Group accommodations*

| Please indicate your level of satisfaction with the Working Group accommodations: | <i>n</i> | Very satisfied | Satisfied | Neutral | Dissatisfied | Strongly dissatisfied |
|--|----------|----------------|-----------|---------|--------------|-----------------------|
| Comfort of the facility in which the Working Group took place | 9 | 56% | 23% | 11% | 0% | 0% |
| Resources of the facility in which the Working Group took place | 9 | 56% | 33% | 11% | 0% | 0% |
| Quality of meals | 9 | 67% | 33% | 0% | 0% | 0% |
| Quality of drinks and snacks provided | 9 | 56% | 44% | 13% | 0% | 0% |

Working Group Format and Content

Participant Learning

Respondents were asked several questions to gauge their level of learning about the main issues related to the research problem, including available research data, the commonalities and difference between conflicting genes, and the possible outcomes of intragenomic conflict. Respondents reported varying degrees of learning. While some participants indicated they either did not gain understanding, or felt “neutral” or about the amount of understanding they gained on several topics, 100% of participants agreed they had a better understanding of the research data available on intragenomic conflict as a result of attending the Working Group (Table 3).

Table 3. Participant self-reports of learning about issues related to the Working Group’s research problem

| As a result of participating in this Working Group, I have a better understanding of: | <i>n</i> | Strongly agree | Agree | Neutral | Disagree | Strongly disagree |
|---|----------|----------------|-------|---------|----------|-------------------|
| the research data available on intragenomic conflict. | 9 | 11% | 89% | 0% | 0% | 0% |
| the commonalities and differences between conflicting genes. | 9 | 22% | 56% | 22% | 0% | 0% |
| the difference between competing and conflicting genes. | 9 | 22% | 33% | 33% | 11% | 0% |
| models of imprinted genes. | 9 | 11% | 44% | 33% | 11% | 0% |
| possible outcomes of intragenomic conflict. | 9 | 11% | 44% | 44% | 0% | 0% |
| new methods and modeling techniques that need to be developed. | 9 | 11% | 56% | 22% | 11% | 0% |

Progress Toward Goals

All respondents agreed that the format of the Working Group was very effective for achieving its goals and that the Working Group made adequate progress toward its goal of finding a common language across disciplines for research on intragenomic conflict; however, one respondent felt it would take several more meetings to fully accomplish this goal. Some participant comments:

“We got hung up a bit on definitions, but I feel this is a necessary step in clarifying the conceptual framework. I think our next meeting should be very productive, given the ground work laid by the first meeting.”

“I would say progress was made toward understanding the issues but that there is still some way to go to come up with a common language.”

Impact on Future Research Plans

Many respondents (75%) said discussing research with others interested in intragenomic conflict was the most useful aspect of the Working Group:

“I have never had a similar opportunity for intensive discussion with a group of other people interested in intragenomic conflict.”

“It was great to pull away from life to really discuss the topic. I feel like it is rare to get to do this, and I appreciated the opportunity.”

“Getting together with individuals who have thought deeply and extensively on genetic conflict, and sharing ideas.”

All respondents indicated they felt that the exchange of ideas that took place during the Working Group would initiate and/or influence their future research. Some participant comments:

“Yes. The group explicitly discussed research plans (e.g. production of joint papers).”

“(The exchange of ideas) highlighted issues of conceptual difficulty / disagreement which will definitely inform my future research on this topic.”

“It strongly influences my thinking on the topic, and stimulates me to continue some theoretical and review oriented analyses of genomic conflict. It does not have an immediate impact on my research, as I am currently enmeshed in some straight genomics type work that needs to be completed.”

In addition to new ideas for research, two respondents said that they developed unanticipated plans for collaborative research with other Working Group participants:

“Yes, I suspect our continued discussions to refine the conceptual framework for genomic conflict will yield new collaborations, as will discussion to explore the role of genetic conflict in speciation.”

Other said, while they don't have a solid plan in place yet, they do plan on developing future collaborations with other Working Group participants:

“Not right now. There is some possibility in the future.”

“No, but I imagine there may still be a possibility for this after future meetings.”

Suggestions for Future Working Group Meetings

Respondents were asked several questions soliciting suggestions for future Working Group meetings. While most respondents said they could not think of anything to change, several did offer ideas. One theme that emerged from analysis of participant comments was the need for better clarification and communication of Working Group goals:

“...Perhaps begin each day with a ~ one hour discussion, where the group can discuss goals and progress.”

“I think a little more structure to focus on a set of goals would be good. On the other hand, for this first meeting it was worthwhile to be more free-ranging.”

Another participant suggested scheduling all presentations before group discussions so that all perspectives could be considered during the discussions. Other suggestions from respondents included better coffee, more access to power outlets in the meeting rooms, and reducing waste by providing reusable coffee mugs to all participants.

Conclusions and Recommendations

Overall, the Working Group was very successful in accomplishing its goals. Working Group participants were satisfied with the meeting, indicating that it was a productive experience that met their expectations. Participants were also highly satisfied with the travel, housing, and other amenities offered by NIMBioS. Participants indicated gaining varying degrees of understanding about the issues surrounding the research problem of the Working Group, but all indicated they had a better understanding of the research data available on intragenomic conflict as a result of attending the meeting. Participants felt that adequate progress was made toward the goal of finding a common language across disciplines in intragenomic conflict research, but that it would take several more meetings before the goals could be fully realized.

Several participants indicated they planned to take the knowledge they gained during the Working Group and apply it to their own research. Two participants also reported they had developed solid plans for collaborative research with other Working Group participants, while others indicated they were in the process of developing collaborative research plans.

While most participants could not think of ways to improve future meetings, several suggestions were offered, including better clarification and communication of the group's goals and scheduling all presentations before group discussions so that all perspectives could be considered during the discussions. Other suggestions included better coffee, more access to power outlets in the meeting rooms, and reducing waste by providing reusable coffee mugs to all participants.

Based on analysis of participant response data, the recommendations are as follows:

- Continue with the current format of the Working Group, but consider ways to more clearly articulate the Working Group's goals to all participants before and during the meeting to ensure everyone is clear on the direction in which the group is heading and how individual participants can contribute to it.
- Consider buying reusable coffee mugs for participants to reduce waste

Appendix A

List of Participants

Participants

| Last name | First name | Institution |
|------------------|------------|---|
| Day | Troy | Queens University |
| Dyer | Kelly | University of Georgia |
| *Gardner | Andy | University of Edinburgh |
| Gavrilets | Sergey | NIMBioS |
| Haig | David | Harvard University |
| Kobayashi | Ichizo | University of Tokyo |
| Queller | David | Rice University |
| Rice | Sean | Texas Tech University |
| Rice | Bill | University of California, Santa Barbara |
| *Ubeda de Torres | Francisco | NIMBioS |
| Uyenoyama | Marcy | Duke University |
| Werren | Jack | University of Rochester |
| Wild | Geoff | University of Western Ontario |
| *Wilkins | Jon | Santa Fe Institute |

* Organizer of Working Group

Appendix B

Intragenomic Conflict Working Group Survey

Intragenomic Conflict Working Group Survey

Thank you for taking a moment to complete this survey. Your responses will be used to improve the Working Groups hosted by the National Institute for Mathematical and Biological Synthesis. Information supplied on the survey will be confidential, and results will be reported only in the aggregate.

NIMBioS will send two reminder emails to Working Group participants who have not responded to this survey. If you would like to be excluded from these reminder emails, please enter your name below. Your survey results will still remain confidential and your name will not be associated with any of your responses in reporting of survey results.

Name:

Please check the appropriate box to indicate your level of agreement with the following statements about this Working Group: (Very satisfied, Satisfied, Neutral, Dissatisfied, Very dissatisfied)

I feel the Working Group was very productive.

The Working Group met my expectations.

The presenters were very knowledgeable about their topics.

The presentations were useful.

I would recommend participating in NIMBioS Working Groups to my colleagues.

Please check the appropriate box to indicate your level of agreement with the following statements. As a result of participating in this Working Group, I have a better understanding of:
(Strongly agree, Agree, Neutral, Disagree, Strongly disagree)

the research data available on intragenomic conflict.

the commonalities and differences between conflicting genes.

the difference between competing and conflicting genes.

models of imprinted genes.

possible outcomes of intragenomic conflict.

new methods and modeling techniques that need to be developed.

Do you feel the Working Group achieved its goal of finding a common language across disciplines for research in intragenomic conflict?

Yes

No

Comments:

Do you feel that the exchange of ideas that took place during the Working Group will initiate or influence your future research? Please explain:

Did you develop unanticipated plans for collaborative research with other Working Group participants?
Please explain:

What do you feel was the most useful aspect of the Working Group?

What would you have changed about the Working Group?

How do you feel about the format of the Working Group?

This was a very effective format for achieving our goals

This was not a very effective format for achieving our goals ->

The Working Group format would have been more effective if:

Is your work currently supported by an NSF grant?

Yes

No

Name of NSF grant:

Institution at which NSF grant is held:

Was your housing during the Working Group arranged by NIMBioS?

Yes ->

No

Overall, how satisfied were you with your housing arrangements?

Very satisfied

Satisfied

Neutral

Dissatisfied

Very dissatisfied

Comments about housing arrangements:

What could NIMBioS have done to make your stay in Knoxville more enjoyable (e.g. better information about nearby attractions, public transportation, etc.)?

Was your transportation to Knoxville arranged by NIMBioS?

Yes ->

No

Overall, how satisfied were you with your travel arrangements?

Very satisfied

Satisfied

Neutral
Dissatisfied
Very dissatisfied

Comments about travel arrangements:

Please indicate your level of satisfaction with the Working Group accommodations:
(Very satisfied, Satisfied, Neutral, Dissatisfied, Very dissatisfied)

Comfort of the facility in which the Working Group took place
Resources of the facility in which the Working Group took place
Quality of meals
Quality of drinks and snacks provided

Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to Working Group participants:

Additional comments about Working Group accommodations:

Please provide any additional comments about your overall experience with the Working Group:

Demographics

Your participation in answering the following questions is completely voluntary and will be used for aggregated reporting only. Answer only those questions with which you feel comfortable.

I am a(n):

Graduate student
Postdoctoral researcher
University faculty—teaching/research
University faculty—teaching only
University faculty—research only
University staff
Business/industry employee
Non-profit organization employee
Other:

If you are affiliated with a college/university, please describe your institution: (check all that apply)

2-year institution
4-year institution
Minority serving institution
Women's only institution
Not applicable

Please give a 2-5 word description of your main area of business/education/research (e.g. mathematical immunology, high school science teacher, etc.)

Gender:

Male

Female

Are you Hispanic or Latino?

Yes

No

What is your racial background? (check all that apply)

American Indian or Alaska Native

Native Hawaiian or other Pacific Islander

Asian

Black or African American

White

Appendix C

Open-ended Survey Responses

Open-ended responses, by question and response category

Do you feel the Working Group made adequate progress toward its goal of finding a common language across disciplines for coalition formation research? Comments: (n=3)

Not yet, but getting there (2)

We got hung up a bit on definitions, but I feel this is a necessary step in clarifying the conceptual framework. I think our next meeting should be very productive, given the ground work laid by the first meeting.

I would say progress was made toward understanding the issues but that there is still some way to go to come up with a common language

Miscellaneous (1)

Most attendees were already multilingual.

Do you feel that the exchange of ideas that took place during the Working Group will initiate or influence your future research? Please explain: (n=8)

Yes (7)

Yes. I found the discussion of the systems stimulating for constructing quantitative models.

Yes. Aside from allowing me to meet a few new people, I found the discussions quite useful for organizing thinking on this topic.

Yes. The group explicitly discussed research plans (e.g. production of joint papers).

Highlighted issues of conceptual difficulty / disagreement which will definitely inform my future research on this topic.

Certainly, though I'm not exactly sure how, yet.

Yes.

It strongly influences my thinking on the topic, and stimulates me to continue some theoretical and review oriented analyses of genomic conflict. It does not have an immediate impact on my research, as I am currently enmeshed in some straight genomics type work that needs to be completed.

Miscellaneous (1)

I plan to continue discussions with the working group.

Did you develop unanticipated plans for collaborative research with other Working Group participants? Please explain: (n=8)

No (3)

not as yet

No, but meeting helped to consolidate existing vague plans.

No, but I am receptive and a number of collaborative interactions seem possible.

Not yet, but planning on future collaborations (3)

Not yet.

Not right now. There is some possibility in the future.

No, but I imagine there may still be a possibility for this after future meetings.

Yes (2)

Yes, and I hope they actually happen!

Yes, I suspect our continued discussions to refine the conceptual framework for genomic conflict will yield new collaborations, as will discussion to explore the role of genetic conflict in speciation.

What do you feel was the most useful aspect of the Working Group? (n=8)

Discussions with others interested in intragenomic conflict (6)

I have never had a similar opportunity for intensive discussion with a group of other people interested in intragenomic conflict.

By far the discussions. This includes the discussions that happened on the hike as well.

Meeting to discuss ideas/perspectives face-to-face.

group discussions.

It was great to pull away from life to really discuss the topic. I feel like it is rare to get to do this, and I appreciated the opportunity.

Getting together with individuals who have thought deeply and extensively on genetic conflict, and sharing ideas.

Miscellaneous (2)

This meeting appeared to concentrate on providing a context for having the members become acquainted with one another's perspective and research. It seemed to accomplish that end well.

Perhaps another meeting, concentrating on producing new studies or grant proposals, might be useful.

I learned different ways of looking at intragenomic conflicts.

What would you have changed about the working group? (7)

Miscellaneous (3)

I felt that the working group ran very smoothly. Perhaps the timing might be tweaked so that the meeting would not coincide with the end of the academic semester. Meeting on the weekend might also be more convenient, but I understand that this might be inconvenient for the non-academic staff. I would have scheduled all 20-min presentations before discussions to ensure all perspectives laid out prior to "brainstorming".

I should have been familiar with the participants' publications before participation.

More focus on goals (2)

Better coffee! , Perhaps begin each day with a ~ one hour discussion, where the group can discuss goals and progress.

I think a little more structure to focus on a set of goals would be good. On the otherhand, for this first meeting it was worthwhile to be more free-ranging.

Nothing (2)

Can't think of anything

Nothing.

Name of NSF grant: (n=1)

Integrative Studies of Wolbachia-Eukaryotic Interactions; Genomes to Communities and Back , Population Biology of the Lateral Gene Transfer from Wolbachia to *Drosophila ananassae*

Institution at which NSF grant is held: (n=1)

Div Emerging Frontiers, Div Environmental Biology

Comments about housing arrangements: (n=3)

Everything was fine (2)

I thought accommodations were terrific. I especially appreciated not having to make reservations myself.

Comfortable. , Able to work on the internet.

Miscellaneous (1)

The free wireless service was practically unusable: spotty, intermittent, and slow.

What could NIMBioS have done to make your stay in Knoxville more enjoyable (e.g. better information about nearby attractions, public transportation, etc.)? (n=6)

Nothing--everything was great (6)

No complaints!

it was great

Nothing comes to mind. I was quite pleased with the non-research aspects of my stay in Knoxville.

Nothing.

I thought everything was great.

All was well, including the nice trip to the Smokies, and Francisco and his wife kindly having us early arrivals to their house for dinner. This was very nice and gracious, and appreciated.

Comments about travel arrangements: (n=5)

Miscellaneous (5)

I had cancelled flights and long delays both coming to and leaving Knoxville. Apparently the flights had been cancelled by Northwest and the cancellation communicated to the Knoxville travel agency but I failed to get the message. this could have been because, (1) A message was not forwarded to me, (2) an e-mail was sent but it got lost and unread in the flood of e-mail I receive

I chose my flight plans, NIMBioS booked them.

Fine.

all was fine. i know david haig had some problems.

Again, I really liked the fact that I did not have to make the arrangements myself. Thanks!

Please indicate any changes NIMBioS can make to improve the resources and/or accommodations available to Working Group participants: (n=2)

Miscellaneous (2)

The meeting room was a bit small, with limited access to power outlets from some locations. Facilities for printing are needed. Access to computation facilities might be useful in the future.

Again, better coffee! It would be awesome to give each person a NIMBioS coffee mug that could be used throughout the group. Then, the mug goes back to the person's institution and becomes a way for NIMBioS to advertise. (Plus, we wasted A LOT of very nice plastic coffee cups throughout the

meeting).

Additional comments about Working Group accommodations: (n=1)

fine accommodations, close to NIMBioS, no more is expected.

Please provide any additional comments about your overall experience with the Working Group: (n=2)

Miscellaneous (2)

The facilities were great and everyone was very friendly. Everything was extremely well organized and I really appreciated that I could not worry about details and just think about science.

convenient to the center

Please give a 2-5 word description of your main area of business/education/research (e.g. mathematical immunology, high school science teacher, etc.) (n=8)

Population genetics (2)

Molecular population genetics, coalescence theory

population genetics

Evolutionary theory (2)

evolutionary theory

Social evolution theory

Evolutionary genetics (2)

evolutionary genetics

genome science (microbial genome evolution)

Mathematical evolutionary biology (2)

mathematical evolutionary biology

Mathematical Evolutionary Biology